DEPARTMENT OF AGRICULTURE AND TECHNICAL
INSTRUCTION FOR IRELAND.

BANKING, RAILWAY, AND CANAL STATISTICS, IRELAND.

[DECEMBER, 1901.]

Presented to both Houses of Parliament by Command of His Majesty

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To

His Excellency GEORGE HENRY, EARL CADOGAN, K.G.,
&c., &c., &c.,
Lord Lieutenant and General Governor of Ireland.

MAY IT PLEASE YOUR EXCELLENCY,

I am directed by the Vice-President to submit to Your Excellency the following Report on the Banking, Railway, and Canal Statistics of Ireland for the half-year ended 31st December, 1901.

I have the honour to remain,
Your Excellency's faithful Servant,
T. P. GILL,
Secretary.

DEPARTMENT OF AGRICULTURE
AND TECHNICAL INSTRUCTION FOR IRELAND,
UPPER MERRION STREET,
DUBLIN, 10TH MARCH, 1902.

DUBLIN CASTLE,
12th March, 1902.

SIR,

I have to acknowledge the receipt of your letter of the 10th instant, forwarding, for submission to His Excellency the Lord Lieutenant, a proof of the Report on Banking, Railway, and Canal Statistics for the half-year ended 31st December, 1901.

I am,
Sir,
Your obedient Servant,
D. HARREL.

THE SECRETARY,
DEPARTMENT OF AGRICULTURE
AND TECHNICAL INSTRUCTION,
UPPER MERRION-STREET, DUBLIN.

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BANKING AND RAILWAY STATISTICS, IRELAND.

(DECEMBER, 1901.)

REPORT

TO THE

SECRETARY OF THE DEPARTMENT OF AGRICULTURE AND TECHNICAL INSTRUCTION FOR IRELAND.

SIR,

I have the honour to submit the following Half-yearly Report on the Banking and Railway Statistics of Ireland, to which I have now added an account of the Irish Canals and Inland Waterways. This Report is composed of Tables and comments dealing with Banking and with the amount of the Government Funds, India Stocks, Guaranteed Land Stock, and War Stock upon which dividends are payable at the Bank of Ireland, together with information concerning the weekly traffic receipts of the Irish Railways for the years 1900–1901. I continue in this Report the history of the development of Co-operative Credit Associations in Ireland, as having a not unimportant bearing on agricultural credit in the poorer districts of the country, and also give three Tables (VII., VIII., and IX.) showing the number, membership, loan capital, and transactions of these institutions in the years 1898, 1899, and 1900, the latest period for which full statistics are available. A set of three Statistical Diagrams, a Map illustrating the systems of Inland Navigation in Ireland, and Tables (XI., XII., and XIII.) showing the development of Irish Railways since the year 1871 will also be found in this Report. I have further compiled from Board of Trade Returns a set of Statistical Tables illustrating the condition of Irish Canals and River Navigations in the years 1888 and 1898, respectively.

The information comprised in the Tables relating to Banking and Investment Statistics consists of the total of the deposits and cash balances in the Joint Stock Banks of Ireland on the 31st of December, 1901, and on the corresponding date in each preceding year since the year 1881, inclusive, compiled from confidential returns kindly furnished by the authorities of the various banks; the balance of deposits remaining in Post Office and Trustees Savings Banks on the 31st of December of each year since the year 1881, inclusive, derived from official sources; the total amount (on 31st December in each year since 1881) of Government Funds, India Stocks, Guaranteed Land Stock (since 1892), and War Stock (created in 1900), on which dividends are payable at the Bank of Ireland, with the amount of each description of Stock on 31st December, 1901, kindly supplied by the Governor of the Bank; and the average bank note circulation of the six banks of issue in Ireland in the month of December since 1891, compiled from the *Dublin Gazette*. In addition to the tables above mentioned, others are inserted which afford half-yearly comparisons for 1901 and the preceding ten years under each of the heads referred to; these half-yearly comparisons help to correct any false impression which might be produced by information collected at a period of the year when the Christmas trade leads to an increased movement of money. The information contained in the tables relative to the Co-operative "Banks" has been kindly supplied by the Secretary of the Irish Agricultural Organisation Society.

I. Banks.

(*a*.) *Deposits and Cash Balances in Joint Stock Banks.*

The deposits and cash balances in the Joint Stock Banks at the close of December, 1901, as shown in Table I., stood at £42,923,000 (exclusive of £1,831,000 Government and other Public Balances in the Bank of Ireland), as compared with £43,280,000 at the corresponding period in the year 1900, being a decrease of £357,000. This is the first time since December, 1887 that the figures in this Table show a decrease, there having been, comparing December with December, a continuous annual increase throughout the intervening period, amounting in the aggregate to £13,509,000. It should be noted, however, that although the amount for December, 1901, is £357,000—only 0·8 per cent.—less than that recorded for December, 1900, the amount for the latter year was the highest ever reached. The statistics of deposits and cash balances in Irish Joint Stock Banks, while an interesting and important item in the consideration of the financial condition of the country, are, of course, in themselves, as was pointed out in my last Report, quite incomplete bases on which to form any judgment as to the general prosperity or decline of industry and trade. They ought, for one thing, to be supplemented by statements and figures as to the amount of loans and advances to customers, bills, mortgage debts, etc., before the materials for criticism of even the banking transactions of the country could be regarded as complete. Unfortunately these special data are not available for all the Irish Banks, so that I am precluded by the nature of this report, which deals with the Irish Banks as a whole, and not with the affairs of individual banking companies, from giving any details of the borrowing transactions to which I have just alluded. I may, however, remark in view of criticism, that as perhaps the main function of modern Banks is, on the one hand, to receive money on deposit from those who cannot themselves employ it productively; and on the other to lend it to those who can, statistics of advances to customers, mortgage debts, etc., would not necessarily, or even usually, be in the nature of a set off to any prosperity which the amount of deposits might be considered to imply. How far they would be such a set off would depend, *inter alia*, on such points, for example, as the relative amount of Irish deposits invested by the Banks in and outside this country respectively; and in regard to the former sums how far such sums were lent for economically productive or non-productive purposes. All statistics it must be remembered are, however complete, open to misinterpretation

The most the statistician can do is to state as precisely as may be the sources, nature, limitations and method of compilation of the particular figures with which he has to deal, and to justify by argument any inference he may wish to draw therefrom.

In Table I. (A) the amounts of deposits and cash balances are compared by half-years: it shows that as usual there was an increase in December as compared with June.

TABLE I.—Showing amount of Deposits and Cash Balances in Joint Stock Banks, on 31st December, 1881–1901, compiled from Returns furnished by the several Joint Stock Banks in Ireland.*

DATE.	Amount.	Yearly Increase.	Yearly Decrease.
	£	£	£
1881, 31st December,	30,161,000	415,000	—
1882, ,,	32,746,000	2,585,000	—
1883, ,,	31,340,000	—	1,406,000
1884, ,,	30,627,000	—	713,000
1885, ,,	29,370,000	—	1,257,000
1886, ,,	30,172,000	802,000	—
1887, ,,	29,771,000	—	401,000
1888, ,,	30,979,000	1,208,000	—
1889, ,,	32,968,000	1,989,000	—
1890, ,,	33,325,000	357,000	—
1891, ,,	34,532,000	1,207,000	—
1892, ,,	35,375,000	843,000	—
1893, ,,	35,852,000	477,000	—
1894, ,,	37,607,000	1,755,000	—
1895, ,,	39,008,000	1,401,000	—
1896, ,,	39,238,000	230,000	—
1897, ,,	39,300,000	62,000	—
1898, ,,	39,438,000	138,000	—
1899, ,,	40,772,000	1,334,000	—
1900, ,,	43,280,000	2,508,000	—
1901, ,,	42,923,000	—	357,000

---

* The names and the dates of foundation of the Banks, the combined statistics of which are included in Tables I. and I. (A), are as follows. Those marked with an asterisk (*) are Banks of Issue.

Name.	Established.	Name.	Established.
*Bank of Ireland,	1783.	*National Bank,	1835.
*Northern Banking Company,	1824.	*Ulster Bank,	1836.
Hibernian Bank,	1825.	Royal Bank of Ireland,	1836.
*Provincial Bank of Ireland,	1825.	Munster & Leinster Bank,	1885.
*Belfast Banking Company,	1827.		

[TABLE I. (A.)

TABLE I. (A)—Showing amount of Deposits and Cash Balances in Joint Stock Banks, in the months of June and December, in the years 1891-1901, compiled from Returns furnished by the several Joint Stock Banks in Ireland.

DATE.	Amount.	Increase.	Decrease.
	£	£	£
1891, 30th June,	33,700,000	375,000	–
„ 31st December,	34,532,000	832,000	–
1892, 30th June,	34,565,000	33,000	–
„ 31st December,	35,375,000	810,000	–
1893, 30th June,	34,637,000	–	738,000
„ 31st December,	35,852,000	1,215,000	–
1894, 30th June,	35,430,000	–	422,000
„ 31st December,	37,607,000	2,177,000	–
1895, 30th June,	37,491,000	–	116,000
„ 31st December,	39,008,000	1,517,000	–
1896, 30th June,	38,758,000	–	250,000
„ 31st December,	39,238,000	480,000	–
1897, 30th June,	38,564,000	–	674,000
„ 31st December,	39,300,000	736,000	–
1898, 30th June,	38,973,000	–	327,000
„ 31st December,	39,438,000	465,000	–
1899, 30th June,	39,840,000	402,000	–
„ 31st December,	40,772,000	932,000	–
1900, 30th June,	40,387,000	–	385,000
„ 31st December,	43,280,000	2,893,000	–
1901, 30th June,	41,568,000	–	1,712,000
„ 31st December,	42,923,000	1,355,000	–

(*b.*) *Savings Banks.**

The balances of deposits in Savings Banks consist of two groups—those in the Post Office Savings Banks which are set out in Table II., and those in Trustees Savings Banks, shown in Table III.

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* For a note on the history of Savings Banks see the half-yearly "Report on Banking, Railway, and Shipping Statistics, Ireland," [June, 1900] (Cd. 335) issued by the Department.

It will be observed from Table II. that on the 31st December last the estimated balances in the Post Office Savings Banks in Ireland amounted to £8,438,000, as compared with £8,059,000 for the corresponding date in 1900, being an increase of £379,000, an addition which, although £37,000 greater than that for 1900, is less than the increase in any of the six years 1894-9 (which increases ranged from £492,000 in 1899 to £634,000 in 1894), but is much in excess of the highest increase in any other year since the establishment of these Banks.

TABLE II.—Showing Estimated Balances, at the undermentioned dates, in Post Office Savings Banks in Ireland; compiled from Returns furnished by the Controller, Post Office Savings Bank Department.

DATE.	Amount.	Yearly Increase.	Yearly Decrease.
	£	£	£
1881, 31st December,	1,723,000	167,000	–
1882, ,,	1,925,000	202,000	–
1883, ,,	2,052,000	127,000	–
1884, ,,	2,224,000	172,000	–
1885, ,,	2,438,000	214,000	–
1886, ,,	2,703,000	265,000	–
1887, ,,	2,932,000	229,000	–
1888, ,,	3,239,000	307,000	–
1889, ,,	3,462,000	223,000	–
1890, ,,	3,723,000	261,000	–
1891, ,,	3,966,000	243,000	–
1892, ,,	4,204,000	238,000	–
1893, ,,	4,343,000	139,000	–
1894, ,,	4,977,000	634,000	–
1895, ,,	5,603,000	626,000	–
1896, ,,	6,153,000	550,000	–
1897, ,,	6,706,000	553,000	–
1898, ,,	7,225,000	519,000	–
1899, ,,	7,717,000	492,000	–
1900, ,,	8,059,000	342,000	–
1901, ,,	8,438,000	379,000	–

Table II. (A) shows by half-years, since June, 1891, the accumulation of deposits in the Post Office Savings Banks. From this Table it appears that, with the exception of the first six months of 1893, there has been a steady increase in each half-year, the amount to the credit of depositors reaching its maximum in December last, when the balance showed an increase of £149,000 as compared with the amount in June, 1901.

TABLE II. (A)—Showing Estimated Balances, at the undermentioned dates, in Post Office Savings Banks in Ireland; compiled from Returns furnished by the Controller, Post Office Savings Bank Department.

DATE.	Amount.	Increase.	Decrease.
	£	£	£
1891, 30th June,	3,878,000	155,000	–
„ 31st December,	3,966,000	88,000	–
1892, 30th June,	4,069,000	103,000	–
„ 31st December,	4,204,000	135,000	–
1893, 30th June,	4,155,000	–	49,000
„ 31st December,	4,343,000	188,000	–
1894, 30th June,	4,687,000	344,000	–
„ 31st December,	4,977,000	290,000	–
1895, 30th June,	5,337,000	360,000	–
„ 31st December,	5,603,000	266,000	–
1896, 30th June,	5,919,000	316,000	–
„ 31st December,	6,153,000	234,000	–
1897, 30th June,	6,443,000	290,000	–
„ 31st December,	6,706,000	263,000	–
1898, 30th June,	6,957,000	251,000	–
„ 31st December,	7,225,000	268,000	–
1899, 30th June,	7,545,000	320,000	–
„ 31st December,	7,717,000	172,000	–
1900, 30th June,	7,791,000	74,000	–
„ 31st December,	8,059,000	268,000	–
1901, 30th June,	8,289,000	230,000	–
„ 31st December,	8,438,000	149,000	–

Table III. shows the amount of deposits at the end of each year in Trustees Savings Banks.

It will be observed that while from the year 1894 to 1899 there had been a continuous increase in the balance in these institutions, the amount on 31st December, 1900 (£2,309,000), was £9,000 under that for the preceding year—which was the highest amount for any of the years 1881–99—but that the figures on 31st December last again show an increase (£50,000), when compared with December, 1900.

TABLE III.—Showing the Balances due to Trustees of Savings Banks in Ireland by the Commissioners for the Reduction of the National Debt, at the undermentioned dates; compiled from Returns furnished by the Comptroller-General, National Debt Office, London.

Date.	Amount.	Yearly Increase.	Yearly Decrease.
	£	£	£
1881, 31st December,	2,042,000	–	37,000
1882, ”	2,078,000	36,000	–
1883, ”	2,060,000	–	18,000
1884, ”	2,097,000	37,000	–
1885, ”	1,981,000	–	116,000
1886, ”	2,007,000	26,000	–
1887, ”	2,043,000	36,000	–
1888, ”	2,029,000	–	14,000
1889, ”	2,042,000	13,000	–
1890, ”	1,973,000	–	69,000
1891, ”	1,966,000	–	7,000
1892, ”	1,967,000	1,000	–
1893, ”	1,876,000	–	91,000
1894, ”	1,982,000	106,000	–
1895, ”	2,075,000	93,000	–
1896, ”	2,166,000	91,000	–
1897, ”	2,236,000	70,000	–
1898, ”	2,275,000	39,000	–
1899, ”	2,318,000	43,000	–
1900, ”	2,309,000	–	9 000
1901, ”	2,359,000	50,000	–

Table III. (A) gives information by half-years from 1891 to 1901 for the Trustees Savings Banks. There was an increase of £19,000 in the half-year ended December, 1901, following an increase of £31,000 in the preceding half-year.

TABLE III. (A)—Showing the Balances due to Trustees of Savings Banks in Ireland by the Commissioners for the Reduction of the National Debt, at the undermentioned dates; compiled from Returns furnished by the Comptroller-General, National Debt Office, London.

DATE.	Amount.	Increase.	Decrease.
	£	£	£
1891, 30th June,	1,972,000	–	1,000
,, 31st December,	1,966,000	–	6,000
1892, 30th June,	1,958,000	–	8,000
,, 31st December,	1,967,000	9,000	–
1893, 30th June,	1,856,000	–	111,000
,, 31st December,	1,876,000	20,000	–
1894, 30th June,	1,940,000	64,000	–
,, 31st December,	1,982,000	42,000	–
1895, 30th June,	2,034,000	52,000	–
,, 31st December,	2,075,000	41,000	–
1896, 30th June,	2,128,000	53,000	–
,, 31st December,	2,166,000	38,000	–
1897, 30th June,	2,211,000	45,000	–
,, 31st December,	2,236,000	25,000	–
1898, 30th June,	2,249,000	13,000	–
,, 31st December,	2,275,000	26,000	–
1899, 30th June,	2,307,000	32,000	–
,, 31st December,	2,318,000	11,000	–
1900, 30th June,	2,295,000	–	23,000
,, 31st December,	2,309,000	14,000	–
1901, 30th June,	2,340,000	31,000	–
,, 31st December,	2,359,000	19,000	–

The progress of the accumulation of small savings in Post Office and Trustees Banks in Ireland combined, is shown in Tables IV. and IV. (A). From Table IV. it will be seen that although not as great as in any of the six years preceding 1900, from the first of which there was a gradual lessening in the amount of the annual increase, the addition to the savings during the year was £96,000 greater than the increase in December, 1900, the total amount in the Savings Banks in Ireland being £10,797,000 in December, 1901, as compared with £10,368,000 for the corresponding period of the year 1900, being an increase of £429,000 for the year.

It will also be observed that there has been an increase in each year since 1881, and that the balance in Savings Banks on the 31st December last, was nearly treble the amount to the credit of depositors at the close of the year 1881, the first year for which statistics are given in the Table. It may be added that it is the highest amount of which there is record.

TABLE IV.—Showing the Totals of the Balances in Post Office and Trustees Savings Banks, given separately in Tables II. and III.

DATE.	Amount.	Yearly Increase.	Yearly Decrease.
	£	£	£
1881, 31st December,	3,765,000	130,000	–
1882, ,,	4,003,000	238,000	–
1883, ,,	4,112,000	109,000	–
1884, ,,	4,321,000	209,000	–
1885, ,,	4,419,000	98,000	–
1886, ,,	4,710,000	291,000	–
1887, ,,	4,975,000	265,000	–
1888, ,,	5,268,000	293,000	–
1889, ,,	5,504,000	236,000	–
1890, ,,	5,696,000	192,000	–
1891, ,,	5,932,000	236,000	–
1892, ,,	6,171,000	239,000	–
1893, ,,	6,219,000	48,000	–
1894, ,,	6,959,000	740,000	–
1895, ,,	7,678,000	719,000	–
1896, ,,	8,319,000	641,000	–
1897, ,,	8,942,000	623,000	–
1898, ,,	9,500,000	558,000	–
1899, ,,	10,035,000	535,000	–
1900, ,,	10,368,000	333,000	–
1901, ,,	10,797,000	429,000	–

Table IV. (A), in which the amount of small savings is set forth by half-years for the past eleven years, shows that during that period, with the exception of the first half of the year 1893, the half-yearly balances in Savings Banks in Ireland continuously increased. The increase in the six months ended 31st December last is £93,000 less than that for the previous half-year, and it is £87,000 below the average increase for the twenty other half-yearly periods showing increases during the years covered by the Table. As between the Post Office Saving Banks and the Trustees Savings Banks the total increase of £168,000 in the Balances for the December half-year, 1901, was divided in the proportion of 89 per cent. in the case of the former and 11 per cent. in the case of the latter.

TABLE IV. (A)—Showing the Totals of the Balances in Post Office and Trustees Savings Banks, given separately in Tables II. (A) and III. (A).

Date.	Amount.	Increase.	Decrease.
	£	£	£
1891, 30th June, .	5,850,000	154,000	–
„ 31st December,	5,932,000	82,000	–
1892, 30th June, .	6,027,000	95,000	–
„ 31st December,	6,171,000	144,000	–
1893, 30th June, .	6,011,000	–	160,000
„ 31st December,	6,219,000	208,000	–
1894, 30th June, .	6,627,000	408,000	–
„ 31st December,	6,959,000	332,000	–
1895, 30th June, .	7,371,000	412,000	–
„ 31st December,	7,678,000	307,000	–
1896, 30th June, .	8,047,000	369,000	–
„ 31st December,	8,319,000	272,000	–
1897, 30th June, .	8,654,000	335,000	–
„ 31st December,	8,942,000	288,000	–
1898, 30th June, .	9,206,000	264,000	–
„ 31st December,	9,500,000	294,000	–
1899, 30th June, .	9,852,000	352,000	–
„ 31st December,	10,035,000	183,000	–
1900, 30th June, .	10,086,000	51,000	–
„ 31st December,	10,368,000	282,000	–
1901, 30th June, .	10,629,000	261,000	–
„ 31st December,	10,797,000	168,000	–

Another interesting aspect of the small savings problem is illustrated by the following Table (IV. (B)), which shows the number of accounts open in each class of Savings Banks on the 31st of December in each year of the period 1884–1900. The growth of the number of depositors in the case of the Post Office Savings Banks is very remarkable, having increased in 1900, as compared with 1884, by as much as 206 per cent.

TABLE IV. (B)—Showing the Number of Accounts remaining open in Post Office and Trustees Savings Banks in Ireland on 31st December in each year of the period, 1884–1900, compiled from the STATISTICAL ABSTRACT for the United Kingdom.

YEAR.	Trustees Savings Banks.	Post Office Savings Banks.	Total for Ireland.
1884, . . .	52,655	124,973	177,628
1885, . . .	50,236	135,777	186,013
1886, . . .	49,775	147 193	196,968
1887, . . .	49,994	158,848	208,842
1888, . . .	49,242	172,305	221,547
1889, . . .	50,455	185,360	235,815
1890, . . .	49,643	198,790	248,433
1891, . . .	49,276	212,076	261,352
1892, . . .	49,005	225,823	274,828
1893, . . .	46,505	235,944	282,449
1894, . . .	47,510	259,870	307,380
1895, . . .	48,123	280,499	328,622
1896, . . .	48,911	301,976	350,887
1897, . . .	49,518	322,486	372,004
1898, . . .	49,725	342,070	391,795
1899, . . .	50,324	362,716	413,040
1900, . . .	50,318	381,865	432,183

(c.) *Government Funds, India Stocks, Guaranteed Land Stock,* and War Stock.†*

It will be seen from Table V. that on the 31st December last the total amount of the Government Funds, India Stocks, Guaranteed Land Stock, and War Stock† on which dividends are payable at the Bank of Ireland, was £31,988,000, or £3,626,000 (£2,252,000 of this increase being in Guaranteed Land Stock), over the amount for the close of the year 1900, and £7,633,000 in excess of that for December, 1897, the last year in which a decline in the amount of these securities is shown. With reference to these increases it is to be noted that the amount of Guaranteed Land Stock for 31st December last was £10,745,000,‡ against £8,493,000 for the corresponding day of the preceding year, and £6,768,000 for the last day of 1899; and that War Stock amounted to £228,000 on 31st December, 1901, against £178,000 on 31st December, 1900.

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* Guaranteed Land Stock was created in 1892.

† War Stock was created in 1900.

‡ This total includes £9,831,000 Mature Stock, £878,000 Immature, and £36,000 amount cancelled.

TABLE V.—Showing the Amount of the Government Funds, India Stocks, Guaranteed Land Stock, and War Stock in Ireland at the under-mentioned dates; compiled from Returns furnished by the Governor of the Bank of Ireland.

DATE.	Amount.	Yearly Increase.	Yearly Decrease.
	£	£	£
1881, 31st December,	31,611,000	–	784,000
1882, ,,	31,804,000	193,000	–
1883, ,,	30,942,000	–	862,000
1884, ,,	30,537,000	–	405,000
1885, ,,	29,689,000	–	848,000
1886, ,,	30,080,000	391,000	–
1887, ,,	29,839,000	–	241,000
1888, ,,	28,669,000*	–	1,170,000*
1889, ,,	27,898,000†	–	771,000†
1890, ,,	26,610,000	–	1,288,000
1891, ,,	25,784,000	–	826,000
1892, ,,	25,198,000	–	586,000
1893, ,,	24,509,000	–	689,000
1894, ,,	26,000,000	1,491,000	–
1895, ,,	25,406,000	–	594,000
1896, ,,	24,486,000	–	920,000
1897, ,,	24,355,000	–	131,000
1898, ,,	25,260,000	905,000	–
1899, ,,	26,758,000	1,498,000	–
1900, ,,	28,362,000	1,604,000	–
1901, ,,	31,988,000	3,626,000	–

The following statement shows in round numbers the amount of each of the several descriptions of Stock included in the total amount given above for December, 1901:—

2¾ per cent. Consols (1903), . . .	£15,691,000
2½ per cent. Stock, ...	315,000
2¾ ,, ,, (1905), . . .	52,000
Local Loans, 3 per cent., ...	868,000
India 3½ per cent. Stock, ...	2,520,000
,, 3 ,, ,, ...	1,457,000
,, 2½ ,, ,, ...	112,000
Guaranteed Land Stock (2¾ per cent.), . .	10,745,000
War Stock (2¾ per cent.), . . .	228,000
Total, . .	£31,988,000

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* India 4 per cent. Stock ceased to bear interest on the 5th October, 1888, and was paid off.

† Reduced 3 per cent. Stock and 3 per cent. Consols ceased to bear interest on the 5th July, 1889.

Table V. (A), made up by half-years, shows an increase of £1,593,000 in December, 1901, as compared with the close of the previous half-year, at which date the amount was £2,033,000 over that for the 31st December, 1900.

TABLE V. (A)—Showing the Amount of Government Funds, India Stocks, Guaranteed Land Stock, and War Stock, in Ireland at the undermentioned dates; compiled from Returns furnished by the Governor of the Bank of Ireland.

DATE.	Amount.	Increase.	Decrease.
	£	£	£
1891, 30th June,	26,609,000	–	1,000
,, 31st December,	25,784,000	–	825,000
1892, 30th June,	26,042,000	258,000	–
,, 31st December,	25,198,000	–	844,000
1893, 30th June,	25,283,000	85,000	–
,, 31st December,	24,509,000	–	774,000
1894, 30th June,	25,375,000	866,000	–
,, 31st December,	26,000,000	625,000	–
1895, 30th June,	25,824,000	–	176,000
,, 31st December,	25,406,000	–	418,000
1896, 30th June,	24,776,000	–	630,000
,, 31st December,	24,486,000	–	290,000
1897, 30th June,	24,216,000	–	270,000
,, 31st December,	24,355,000	139,000	–
1898, 30th June,	24,554,000	199,000	–
,, 31st December,	25,260,000	706,000	–
1899, 30th June,	26,072,000	812,000	–
,, 31st December,	26,758,000	686,000	–
1900, 30th June,	27,021,000	263,000	–
,, 31st December,	28,362,000	1,341,000	–
1901, 30th June,	30,395,000	2,033,000	–
,, 31st December,	31,988,000	1,593,000	–

(*d.*) *Bank Note Circulation.*

The Bank note circulation of the six Irish Banks of issue, though its fluctuations are still of considerable interest, and are, to some extent, significant of variations in the volume of trade and level of prices, is, relatively, of diminishing importance as a test of the general prosperity of the country. The following statement shows this plainly:—

YEAR.	Average Bank Note Circulation.	Deposits in Irish Joint Stock Banks.
	£ (000 omitted.)	£ (000 omitted.)
1860,	7,048	15,609
1880,	7,048	29,746
1900,	7,288	43,280

Thus, while the Bank note circulation has remained practically stationary since 1860, the deposits in Irish Joint Stock Banks have increased in the same period by nearly 200 per cent. The great growth and spread of banking facilities throughout the country; the increasing use of other credit agencies, such as cheques, bills, and even Post Office Orders; and the extension of the Clearing House system, all tend to limit the need of the bank note as a currency medium. This is noticeable even in the case of England, as appears by the following statement:—

AVERAGE Note Circulation (Three Years Periods) of Bank of England.

	£ Millions.
1876–8,	27·9
1879–81,	27·5
1882–4,	25·6
1885–7,	24·6
1888–90,	24·4
1891–3,	25·6
1894–6,	25·9
1897–9,	27·4

Coincident with this declining or stationary condition of the active note circulation in England there has, of course, been an enormous development in the volume of trade and a vast extension of the banking business. It has been estimated that in 98 per cent. of the commercial transactions of Great Britain, credit, in one form or another, is now the only medium of exchange, and this naturally results in a great economy in the use of the precious metals as currency. In Ireland and Scotland the one-pound issue has kept the average of the note circulation much more constant than in England, where, as is well known, no such issue exists. Indeed, in Scotland the note circulation has considerably increased within the past quarter of a century, and continues to increase. The Scotch people like the use of notes in the transaction of their business, and, in fact, often prefer them to specie as a medium of exchange. "The strength of the Scottish system of banking is," writes Professor Nicholson, "mainly due to the fact that, owing to long experience, the people are so familiar with notes, and so confident in their stability of value, that if they happen to become afraid of the notes at one bank they would prefer the notes of other banks to gold itself." It would require a glance at the history of banking in Scotland to explain fully this apparent anomaly, but the fact itself is illustrated by the growth of the note circulation of that country. It is significant, also, that while of the nine Irish Joint Stock Banks but six are banks of issue, all the existing Joint Stock Banks in Scotland—ten in number—are empowered to issue notes.

The Bank Charter Act of 1844, and the Act of 1845 extending certain provisions of the 1844 Act to Scotland and Ireland, are the foundation of the present issue of bank notes in the United Kingdom. Up to the date of the Bank Act any banker might issue notes to the public with the sole obligation of paying them in gold when presented, under pain of being declared a bankrupt. The Act of 1844, it will be remembered, assigns a limit, namely, 14,000,000 sterling (now 17,774,000, January, 1902), to the note issue against securities, and prescribes that for every note issued beyond that limit gold must be held. It is worth remarking that no restriction is placed on the issue of bank notes by the Act of 1844—I mean, no limitation of their numbers. If the public chose, it might have £100,000,000 in notes, the only condition being that beyond the amount fixed by the Bank Charter Act gold must be held against the surplus. The Act further limits the issue of notes of English country banks to the average of their circulation at a certain period before the passing of the statute. It further prohibits the creation of new country banks of issue, and it provides that if any of the English country banks should, from whatever cause, cease to issue notes, the Bank of England shall issue notes, in addition to the 14,000,000, to the extent of two-thirds of the lapsed issue. The line of issue covered by actual gold stands at present, as I have said, at 17½ millions. The provision just quoted was virtually a decree for the extinction of private issues, but, in so far as it was, it has been a comparative failure.

It is remarkable that every bank of issue in Ireland which was in existence in 1844 is still carrying on business, a record of stability which neither England nor Scotland can boast of. To the banks of issue in Scotland and Ireland the Acts of 1844-45 gave more favourable terms than they did to the English country banks. The authorised note issue of the Irish and Scotch banks was, as I have said, limited to the amounts which will be found in the note on page 27, but their issuing powers are practically unlimited, the sole restriction being that for every pound note issued beyond the limits of the Act fixed in 1845, one pound in gold shall be held, not as security, but as representing the addition to the currency circulating in the country. By this Act the only remaining vestige of the Bank of Ireland's monopoly (beyond being the Government bank) left by the Act of 1820, whereby banks with more than six partners were prohibited from transacting business in Dublin and fifty Irish miles therefrom, was removed, and the whole country was thus thrown open to joint stock enterprise. Joint Stock Banks, so established, were then empowered to deal in bills at any less date than six months. The Bank of Ireland was to manage the public debt of Ireland free of charge: the interest on advances made by it to Government was reduced to 3½ per cent. which became 3 per cent., in 1865; it was entitled, in the event of any bank relinquishing note-issue, to increase its note-issue by the amount relinquished, but the relinquishing bank could not thereafter resume the power so surrendered: bankers uncertified by the Commissioners of Stamps and Taxes were prohibited from issuing notes: limitation of note-issue was provided for: bank-notes for fractional parts of a pound, or for a pound and a fraction, were prohibited, under a penalty of £20 for each note issued: issuing banks were required to render weekly accounts of their note-circulation and stock of specie at the head office or principal places of issue to the Commissioners of Stamps and Taxes, who were also empowered to cause an inspection of books: public officers were allowed to become partners in banks: banks were bound to return once a year to the Stamp Office, Dublin, a list of the names, addresses, and professions of their partners: power was given to sue and be sued by their public officers: promissory notes or bills of exchange for sums under a pound were made unnegotiable: such are the chief provisions by which banking, as we now understand it, was settled to be conducted in this country. This Act also decided the doubts which had arisen, and on which the most eminent counsel were divided, as to whether Bank of England notes were legal tender in Ireland. It enacted (which will be information to many) that they were not, but that "nothing in this Act shall be construed to prohibit the circulation in Ireland of the notes of the Governor and Company of the Bank of England as heretofore." Bank of Ireland notes are legal tender only in payment of Revenue.

That the note circulation in Ireland should show such a tendency to remain stationary is somewhat curious in face of such a development of banking facilities as is illustrated in the following Statement ;—

STATEMENT showing the Growth of Banking Business in Ireland. (Figures are taken from "*Thom's Official Directory*.")

YEAR.	Number of Towns in which there are one or more Bank Offices.	Number of Banking Companies.	Number of Banking Offices (including Sub-Offices and Agencies).
1850, . .	91	11	177
1860, . .	99	8*	185
1870, . .	152	9†	294
1880, . .	243	9	450
1890, . .	249	9	502
1900, . .	267	9	520

In 1850 there was, in round numbers, one bank-office for every 39,000 of the estimated population ; in 1870, one bank-office for every 18,000 ; and in 1900, one bank-office for every 8,000 of the estimated population. The continuous decrease in the population must be kept in mind in considering the interpretation of these figures. The gradual decrease in the number of small holdings, and also the continuous transformation of agriculture from corn-raising to meat-raising, which have accompanied that decrease, may, conceivably, imply a diminution in the total wealth of the country, while at the same time they tend to swell the bank-deposits, and to create a greater demand for banking services. A hundred tillage farmers, each cultivating a twenty-acre farm, may, quite possibly, not have a bank account among them. The same tract of 2,000 acres laid down to permanent grass and used for grazing, may be rented by (say) two men, each of whom would probably have a considerable account in a bank, and certainly would constantly need the credit and other facilities offered by a bank. The abnormal increase in the distributing class in this country (and particularly those concerned in buying and selling) which each successive Census since 1841 reveals would also, in my opinion, tend in the direction just indicated.

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* The Clonmel National, Carrick-on-Suir National, and Tipperary Banking companies drop out.

† Munster Bank established.

Referring to the establishment of the National Bank in 1835, Mrs. Morgan John O'Connell wrote :—"It was intended to be especially a poor man's bank, got up for the purpose of enabling the lower classes to invest their small savings, and thus get an interest for their money, instead of trusting their pound notes to the fortunes of an old stocking, a cracked teapot, or even a hole in the thatch. These expedients for saving money were not uncommon, and those who were a little more enlightened used frequently to hand over their money to a friend to 'keep safe' for them. Even I, born five years after the National Bank was first established, have been asked by people to take charge of their little hoards. And in the old days there were many traders, like my father's [Charles Bianconi's] old friend, Mary Kirwan, who used to gain considerably by the small sums entrusted to them—of which they were allowed to keep the interest."

Having regard to this hoarding propensity on the part of the people up to quite recent times, and in view of the spread of branch banks to remote towns and villages, the continuous increase in the deposits of Irish Joint Stock Banks may, I believe, be in part attributed to a transfer of the wealth of the country from the homes of the people to the banks rather than to an actual increase in that wealth, though probably there has been an increase per head of population as well. To return to the question of bank-note circulation, it will be seen from Table VI. that there was a decrease of

£473,000 in the average circulation in December last as compared with that for December, 1900, following an increase of £474,000 in that month as compared with December, 1899. Although less than the amount for December, 1900, the average circulation (£6,815,000) for December last was greater than that for the corresponding month in any of the nine years preceding 1900.

The note-circulation is on an average more than £500,000 higher in the December half of the year than in the June half. This is due, no doubt, amongst other causes, to the payment of harvest wages, the needs of the holiday-season, the large October fairs, the great increase in exports of live stock to Great Britain in the December half, and the requirements of the Christmas season, all of which make increased demands on the circulating medium. Any reduction of the price of live stock or any decrease in the volume of live stock trade, *pro tanto*, diminishes the demand for notes. These causes, it seems to me, explain a good deal of the decrease of £473,000 in the average amount of bank-note circulation in December, 1901, as compared with December, 1900. The great decline in the cattle export trade in 1901 as compared with 1900, especially in the autumn of last year, is shown in this table.

MONTH.	Number of Cattle Exported.		1901 as compared with 1900.	
	1900.	1901.	Increase.	Decrease.
January,	46,525	45,554	–	971
February,	36,400	39,419	3,019	–
March,	47,668	44,748	–	2,920
April,	48,730	46,741	–	1,989
May,	55,440	40,885	–	14,555
June,	49,449	30,186	–	19,263
July,	43,432	23,386	–	20,046
August,	56,468	41,753	–	14,715
September,	92,057	69,454	–	22,603
October,	119,602	109,065	–	10,537
November,	100,744	105,228	4,484	–
December,	49,620	46,668	–	2,952
Total,	746,135	643,087	–	103,048

Not merely, however, was there a great falling-off in the export of cattle to Great Britain in 1901—due to the shortage of hay and roots in England and Scotland—but, as a natural result of the slack demand, prices of all classes of live stock fell considerably. The following statement shows the extent of this decline of prices in the December quarter of 1901 compared with the corresponding period of 1900:—

RETURN of Average Prices for each Province and for the Whole of Ireland of certain classes of Live Stock for the Quarter ended 31st December, 1901, and for the Whole of Ireland for the corresponding Quarter of 1900.

LIVE STOCK.	PROVINCES.				Whole of Ireland, 1901.	Whole of Ireland, 1900.
	Ulster.	Munster.	Leinster.	Con-naught.		
Cattle:—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
One year old, per head,	5 19 0	6 19 2	7 0 2	6 11 11	6 12 6	7 8 10
Two years old, ,,	8 4 10	9 14 10	10 13 2	9 3 2	9 11 11	10 4 2
Three years old, ,,	13 2 2	11 6 7	12 15 10	11 5 3	11 15 7	12 8 0
Springers, ,,	12 15 0	13 11 7	14 7 0	14 14 7	13 12 3	13 16 5
Sheep:—						
Lambs, per head,	1 1 7	1 2 7	1 4 8	1 1 7	1 2 3	1 5 1
Over 12 and under 24 months old, ,,	1 5 0	1 12 0	1 17 1	1 13 1	1 13 3	1 16 10
Two years old and upwards, ,,	0 18 5	0 19 10	1 4 5	1 18 1	1 16 2	2 0 8

TABLE VI.—Showing the Average Bank Note Circulation of the Six Banks of Issue in Ireland in December of the Years 1891–1901; compiled from Accounts published by the Registrar of Bank Returns, pursuant to the Act 8 & 9 Vic., cap. 37.*

PERIODS.	Amount.	Yearly Increase.	Yearly Decrease.
	£	£	£
1891, December,	6,643,000	–	455,000
1892, „	6,287,000	–	356,000
1893, „	6,536,000	249,000	–
1894, „	6,501,000	–	35,000
1895, „	6,459,000	–	42,000
1896, „	6,412,000	–	47,000
1897, „	6,468,000	56,000	–
1898, „	6,401,000	–	67,000
1899, „	6,814,000	413,000	–
1900, „	7,288,000	474,000	–
1901, „	6,815,000	–	473,000

It will be observed from Table VI. (A) that the usual increase of note circulation in December, as compared with June, took place in the year 1901; the increase on this occasion was £390,000, being £429,000 below the increase in December, 1900, as compared with June of that year, and, with two exceptions, the smallest increase in the second half of any of the years 1891–1901.

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* There are Six Banks in Ireland authorized to issue Notes, the statistics of which are included in this table. The total authorized issue of Notes for these Banks is £6,354,494, distributed as in the following Table:—

Name of Bank.	Amount of Authorised Circulation.
	£
Bank of Ireland,	3,738,428
Provincial Bank of Ireland,	927,667
National Bank,	852,269
Ulster Bank,	311,079
Belfast Banking Company,	281,611
Northern Banking Company,	243,440
Total,	6,354,494

The Note circulation of Irish Banks of Issue for the year 1901 (£6,815,000), is 6·5 per cent. less than the circulation (£7,288,000) in December, 1900, which was the largest on record since the year 1882.

TABLE VI. (A.)—Showing the Average Bank Note Circulation of the Six Banks of Issue in Ireland, in the months of June and December of the years 1891–1901; compiled from Accounts published by the Registrar of Bank Returns, pursuant to the Act 8 & 9 Vic., cap. 37.*

PERIODS.	Amount.	Increase.	Decrease.
	£	£	£
1891, June,	6,165,000	–	933,000
„ December,	6,643,000	478,000	–
1892, June,	5,965,000	–	678,000
„ December,	6,287,000	322,000	–
1893, June,	6,088,000	–	199,000
„ December,	6,536,000	448,000	–
1894, June,	6,007,000	–	529,000
„ December,	6,501,000	494,000	–
1895, June,	6,248,000	–	253,000
„ December,	6,459,000	211,000	–
1896, June,	5,918,000	–	541,000
„ December,	6,412,000	494,000	–
1897, June,	5,858,000	–	554,000
„ December,	6,468,000	610,000	–
1898, June,	5,740,000	–	728,000
„ December,	6,401,000	661,000	–
1899, June,	5,991,000	–	410,000
„ December,	6,814,000	823,000	–
1900, June,	6,469,000	–	345,000
„ December,	7,288,000	819,000	–
1901, June,	6,425,000	–	863,000
„ December,	6,815,000	390,000	–

The results of the analysis of the foregoing Tables are :—

1st. That in December, 1901, there was a decrease of Deposits and Cash Balances in the Irish Joint Stock Banks as compared with the corresponding period in 1900, amounting to £357,000.

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* See note (*), p. 27.

2nd. That there was an increase of £1,355,000 in Deposits and Cash Balances in the Irish Joint Stock Banks in December, 1901, as compared with June of that year.

3rd. That there was an increase of £429,000 in the Deposits in Savings Banks in Ireland in December, 1901, as compared with the close of the year 1900, there having been an increase of £379,000 in the sum in the Post Office Savings Banks, and of £50,000 in the amount in the Trustees Banks.

4th. That there was an increase of £168,000 in the Deposits in Savings Banks in December, 1901, as compared with the amount for June in that year.

5th. That the amount (in December, 1901) of Government Funds, India Stocks, Guaranteed Land Stock, and War Stock, on which dividends are payable at the Bank of Ireland, shows an increase of £3,626,000 as compared with the amount at the close of the preceding year.

6th. That in December, 1901, there was an increase of £1,593,000 in the amount of Government Funds, India Stocks, Guaranteed Land Stock, and War Stock on which dividends are payable at the Bank of Ireland, as compared with June of the same year.

7th. That in December, 1901, there was a decrease of £473,000 in the average amount of Bank Note circulation as compared with the circulation in the corresponding period of 1900.

8th. That there was an increase of £390,000 in the Bank Note circulation in December, 1901, as compared with June of the same year.

The above figures and results are, on the whole, satisfactory, and, so far as they go, are evidences of the financial prosperity and thrift of certain classes of the community. Their full interpretation as bearing on the material prosperity of Ireland as a whole is, however, a difficult and delicate matter, involving considerations and issues beyond the scope of the Report. At the same time, it ought to be pointed out—what is, indeed, somewhat obvious—that the banking and other statistics contained in the Report, even if they were far more complete than they are, must be collated with the data supplied by other official Returns—such, for example, as those on emigration and agricultural statistics—before they can be made the foundation of any generalisation as to the economic condition of the country at large.

(e.) *Co-operative Credit Associations.*

The organisation of Co-operative Credit Associations in the rural districts of the South and West of Ireland was inaugurated in February of the year 1894, by the establishment of a "bank" at Doneraile, Co. Cork. The success of this trial institution, which was founded on what is known as the Raiffeisen system, naturally led to the creation of similar institutions in various parts of the country, and at the end of the year 1901 there were as many as one hundred and three of these rural "banks" registered. Herr F. W. Raiffcien, the creator of the "loan bank" system which bears his name, was born in the year 1818 at Haum in Westphalia. Brought into sharp touch with the misery of the poor peasant cultivators of the Rhineland, through his official position as Burgomaster of several districts in the Westerwald, Raiffeisen determined to see if he could not alleviate their chronic suffering and poverty by the application of the principle of co-operation to their several needs. His first venture was a co-operative bakery, which was quickly followed by a co-operative cattle-purchase association. But successful as these experiments immediately proved—and such associations can now be counted by the hundred on the Continent—the lack of capital remained as a fatal flaw in the economy of the Westerwald peasantry. To supply this Raiffeisen started at Hammersfeld, in the year 1849, his first co-operative credit association. Not till five years later was a second "bank" started, and again Raiffeisen himself was the founder. In 1862 a third was formed; in 1868 a fourth. In 1896 no fewer than 2,169 Raiffeisen "banks" were at work in Germany alone. Their founder had then been dead for eight years, but the associations which "Father Raiffeisen"—as he is affectionately spoken of by his own countrymen—had originated, grew and are growing apace in every European country.*

The practical problem which faced Raiffeisen in the Westerwald was to supply a very poor agricultural people, who had two of the requisites of production—land and labour—with the third, to wit, capital. This he did by uniting the peasants as shareholders in loan associations, regulated on the principle of unlimited liability. In these societies every member is equally, jointly, and severally liable with every other member for the debts of the association. This was the first safeguard of the "bank"—it secured care and caution in the admission of members, and constant supervision in the application of a loan. The second safeguard was afforded by the invariable rule that loans were made for a productive purpose only—a matter to be decided by the committee of the association—that is to say, by men intimately acquainted with the character and circumstances of the applicant for a loan, and each, individually, liable to be mulcted in case of his default. Raiffeisen was emphatic as to the necessity for restricting the operations of each association to a particular area—a village, a parish, a townland—and the wisdom of such a course cannot be questioned, having regard to the principles and aims of these organisations. It is also clear that the principle of unlimited liability is only possible where all the members of a comparatively poor community are, more or less, on an equality in regard to the possession of worldly goods. The members of the committee, or other officials of the banks, get no salaries, and no dividends are paid—profits, when there are any, going generally towards the formation of a reserve fund. The tables given in this report must, therefore, not be judged from the standpoint of an ordinary joint-stock bank balance-sheet. The measure of the prosperity of these credit associations is not large profits or handsome dividends, but rather the extent to which the capital of the "bank" has subserved the needs of its members, and proved productive in their hands; and the absence of serious loss. With three exceptions, all the credit associations in Ireland are Raiffeisen "banks," and consequently I need not do more here than allude to the well-known fact that there have been in Germany and Italy other apostles of co-operative credit in town and country whose fame is only second to that of Raiffeisen himself. Herr Schulze—called Schulze-Delitzsch from his birthplace—organized his first credit association in 1850—a year after the first Raiffeisen bank was established at Flammersfeld. The Schulze "banks" are savings banks as well as credit associations, and their growth has been mainly in Continental towns. Their founder wished to bring credit and the opportunity for thrift to the doors —not of a rural peasantry—but of the artisans and small shopkeepers of town populations. The success of the Schulze-Delitzsch associations on the Continent has been remarkable. There are, at the present moment, several thousands of these organisations in Germany alone, and they have spread to Austria, Italy, and France. Still another modification of the system of co-operative credit is found in the "Banche Popolari," which Italy owes to the genius and zeal of Commendatore Luigi Luzzatti. Luzzatti started his first People's Bank in Milan in 1865. Avowedly inspired by the idea of Schulze-Delitzsch's associations, Luzzatti considerably modified the German's conception with a view to meeting the special needs of Italy. It is enough, in this place, to mention, in regard to these modifications, Luzzatti's rejection of the principle of unlimited liability. The "banche popolari" were town "Banks"; Italy needed also its rural credit associations. To supply these was the mission of Signor Wollemborg, a Venetian landlord, whose immediate desire was to rescue his tenantry and their neighbours from the thraldom of usurers. In June, 1883, the first Italian rural "bank" was organised. In essentials the "casse rurali" of Italy are Raiffeisen associations. An enormous impetus was given to the spread of the rural "banks" of Italy by the energy and ability of Father Cerutti—the parish priest of Gambarare, in Venetia—who since 1890 has been the promoter of hundreds of these institutions in Venetia alone.

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* See "People's Banks," by Henry W. Wolff. London: P. S. King and Son.

In order to give some idea of the character of these rural credit associations in Ireland, I extract the following comments on their effects from the Sixth Report of the Irish Agricultural Organisation Society. The Secretary of the Burren Bank writes:—

> "For a time only twenty-six members co-operated; others watched closely, and after a time when they saw the marvellous profits attained by borrowers in short spaces of time, it was then they really took to their mind; what profits they could have gained had they embarked on the same ship as their more spirited neighbours, who seemed to be out-

vieing each other to see who could boast of the greatest profits to his own purse after paying back the principal. I have known people who, before they became members, were quite indifferent about either themselves or their homes, and 'drank' on every occasion they could; but since they have joined the Bank are now some of the most thrifty and fast-rising people in the place, and will turn a sixpence about a score of times in their fingers before bidding good-bye to it. So you can understand we have set the axe to the roots of the huge trees of drunkenness and unthriftiness."

Another letter, from the Rev. P. Kilkenny, P.P., Claremorris, tells the same story. He writes :—

"I have great pleasure in stating that, in my opinion, the objects of the philanthropic gentlemen who have promoted the establishment of Agricultural Banks in Ireland are fully realised in the case of the small Bank of Murneen. The means at its disposal are no doubt slender, still it is easy to point to cases where the loan received from the Bank has produced twice or even thrice the amount borrowed. Cattle and pigs that would have been sold to the great loss of the borrower we enabled to be retained until their full value was realised.

"Greater even than the material advantages of the Bank are the moral effects resulting from it in the district of Murneen: firstly, in the education the people are receiving in the true use of credit, and again in the gain for the country that can so easily be obtained from mutual co-operation. Heretofore the man who borrowed lost caste in the neighbourhood, was regarded as a ne'er-do-well, and fast hastening to join the class who are a burden on society. Now the people are learning that it is honorable, when necessary, to borrow for the honest purpose of improving one's position and ascending higher the ladder of industrial prosperity. From the success that has attended the working out of this little experiment in such a remote district, one is forced to wish that branches were multiplied in the country, that this influence for good may be more widely extended."

From the Reports of the Secretaries of several Raiffeisen "Banks" I have taken the following typical instances of loans, the purposes to which they were put, and the results, which give an insight into the nature of the transactions negotiated by these small rural credit associations. I have omitted the names and residences of the borrowers—

—— £4 for ten months—bought 4 bonhams; sold them before the loan had expired for £16.

—— £3 purchased 3 bonhams, which died when value about £6. Paid loan punctually and got new one.

—— £3 for ten months; bought 3 bonhams, which he sold in nine months for £15. Paid his loan and got a new one of £2 10*s.*, no more money being available.

—— got £3 for ten months; bought two bonhams at 25*s*., sold them in nine months at £5 10*s*. Also purchased a calf for £2 12*s*. 6*d*., sold it in ten months for £6.

—— £3 for ten months; purchased a calf which sold after six months for £5 5*s*. Paid his loan and invested residue in pigs. Has a new loan.

—— £2, ten months—bought pigs, which he sold in nine months for £6 10*s*.

—— £2, ten months—bought pigs. Both pigs and borrower died. His widow paid loan punctually and in full, and got a new advance.

—— got £3—bought two sheep and paid his passage to England. The sheep had two lambs, with which he paid loan. He has now five sheep.

—— would have had to sell a springer to take him to England, but borrowed £3 and kept his beast. He has a cow and calf now, and paid his loan out of money made in England.

—— £3, for six months—bought two young pigs for 30*s*. and manures and seeds. Pigs sold in October for £5 10*s*.

—— £3, for four months—bought two young pigs and paid his fare to England. Results splendid.

The following statement as to the transactions of a typical "Bank" may be of interest;—

CLARE ISLAND AGRICULTURAL BANK, CO. MAYO.

Amount.	Time.	Purpose.	Length retained.	Profit.[*]
£ s. d.				£ s. d.
2 0 0	10 Months.	2 Bonhams.	8½ Months.	9 5 0
2 0 0	10 ,,	2 ,,	10 ,,	6 5 0
5 0 0	7 ,,	3 Calves.	7 ,,	10 5 0
5 0 0	12 ,,	2 ,,	9 ,,	7 0 0
1 0 0	11 ,,	2 Bonhams.	11 ,,	7 15 0
1 0 0	10 ,,	1 ,,	10 ,,	4 0 0
1 10 0	10 ,,	2 ,,	10 ,,	7 2 6
2 0 0	10 ,,	2 ,,	10 ,,	7 0 0
£19 10 0				£58 12 6

The confidential reports of the secretaries of the various Banks (which I have been permitted to read) show clearly that most of the borrowers could profitably employ two and three times as much capital as the funds of the local Bank place, at present, within their reach. It is consequently a matter of some moment that the loan capital funds of these associations should be augmented. In this connection I may quote a paragraph from the Sixth Report of the Irish Agricultural Organisation Society :—

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[*] The term "Profit," as here used, means the gross return exclusive, of course, of the amount of the loan.

> "We have great pleasure in recording the enlightened policy of the Congested Districts Board in aiding these banks, which has been fully justified by the results. The Board has allowed banks in congested districts to borrow loan capital from it to the extent of £3,000. The amount lent to the individual societies varies from £50 to £200, on which they pay interest at the rate of 3½ per cent. About these small deposits as a nucleus other sums gather by degrees, and a sufficient capital will in time be acquired. Much might be done by the Joint Stock Banks if they would recognise the security formed by an association, and the fact that these little societies cannot be regarded as rivals, but as feeders, enabling the large banks to utilize their capital in promoting enterprise in a class hitherto excluded from their help."

The Department of Agriculture and Technical Instruction also have decided to allocate certain sums to the purposes of the organization and capitalization of Raiffeisen credit associations in non-congested areas, so that the difficulty of insufficient capital will probably be a transitory one. It is clear, however, that the time will come when, with the extension of these small local banks working within a very narrow area, the need of some sort of central credit organisation to serve both as a distributor, on reasonable terms, of capital to the local credit societies and as a kind of clearing house for these societies *inter se*, will become a pressing one. This has been the case in continental countries, and the experience will probably be repeated here. Of course outside the sphere of operation of these Raiffeisen credit associations—which deal only, and by their nature can only deal, with a small though, in Ireland, a very important part of the whole field of agricultural credit—there is room and opportunity for organising (again on continental models) agricultural credit more thoroughly, with a view to bringing within the reach of all those engaged in the greatest industry of this country, credit facilities on terms not more onerous (and this involves the question of the *duration* of the loan, no less than of the interest on it) than those on which a solvent manufacturer or merchant can now secure capital to develop his business.

It will be noticed that practically all the capital got on loans is employed, in the cases above quoted, for stocking the land. Most of the borrowers are small farmers on whose holdings—averaging from 10 to 30 acres—there is generally a disproportionally large percentage of more or less rough pasture. The credit facilities offered by the local banks enable them to buy young stock for this grazing, or an almost equally important boon, to hold over any stock they may have until such time as prices turn in their favour. The great "profit" that is the usual outcome of the use of this "lucky money"—ranging, it is stated on good authority, from 25 per cent. to 150 per cent.—arises, of course, not from the use of the money alone, but from its employment on land and with labour which, before the addition of such capital, were, to all intents and purposes, valueless. In fact the value and the need of capital in the case of these poor landholders (on such terms of interest and for such a period as they can afford to borrow it) are emphasised by the quite abnormal returns ("profits") which in a very large number of cases are gratefully recorded.

Some of the loans, it will have been observed, are sought for by migratory labourers, and repaid out of monies earned in England or Scotland. It is, perhaps, worth pointing out that though the "migrants" go annually to Great Britain in search of work, many of their own farms would profitably respond, were capital available, to a very considerable amount of intelligently applied labour. The reason for this anomaly seems to be that, (as I took occasion to point out in my Report on Migratory Labourers for 1900), there is no distinct class of agricultural labourers in these districts, and hired labour is consequently very difficult to obtain even were the capital at hand to pay for it, while, at the same time, the labour of an occupier without help from his family would not generally suffice to work his holding profitably on a system of even moderately intensive culture, not to speak of his inability to wait over a season for the reward of his industry. The lack of capital, which is the chief want, turns the balance of advantage in favour of migration. A case in point will illustrate what I mean: "A. B., in the district of Burren (Co. Mayo), has a holding of eight acres of tillage land and a large run of mountain grazing, but is compelled to go to England every year to earn money to meet his calls. He would, according to his own statement, be better off if he could stay at home and work his farm, but he has not sufficient capital to keep going at home for a twelvemonth. He, however, has a large family of small children which, although an encumbrance now, will, he believes, when the boys are able to handle a spade, be the means of making him an independent man. Thus men, even with good holdings, are compelled to go to England year after year because their unaided toil is not sufficient to work their farms." (Report (unpublished) of Mr. Paul Gregan, Bank Organiser, I.A.O.S.).

Another small tenant (a woman) whom Mr. Gregan interviewed in Burren said that "if money were easily got the men would stay at home, which she maintained, would be far more profitable than going to England, where they learn bad habits." "In connection with the labour problem in Burren," the same gentleman writes: "I have been endeavouring to introduce the use of small, wheeled, one-horse ploughs, light enough for a man to carry on his back, and not too deep for the shallow soil. There is not a single plough in Burren." The want of capital, in the form of money or of such machinery and other equipment as the rural economy of small holdings of poor land would justify, is, it is obvious, a grievous want in the districts served by these Raiffeisen credit associations, and consequently their increase and success must be regarded as a most hopeful and helpful means in the uplifting of backward agricultural communities.

The following Tables show that a large percentage of the rural banks are in Congested Districts. There are in Mayo as many as 25 of these co-operative credit associations, in Galway 14, in Donegal 10, in Wexford 4, in Clare and Sligo 3 each, 2 each in Queen's County, Roscommon, Cavan, Waterford, and Tyrone, and 1 in each of the Counties Cork, Kerry, Tipperary, Armagh, Down, Kilkenny, and Londonderry. It will be noticed that 3 of the 4 "banks" registered in the County Wexford do not admit the principle of unlimited liability which is characteristic of the true Raiffeisen "bank."

The following statement shows the growth of co-operative credit associations in Ireland since 1895.

CO-OPERATIVE CREDIT ASSOCIATIONS IN IRELAND, 1895–1901.

	1895, 31st Mar.	1896, 31st Mar.	1897. 31st Mar.	1898, 31st Mar.	1899, 31st Mar.	1900, 31st Dec.	1901, 31st Dec.
No. of Associations,	1	2	3	15	48	75	103

The membership has grown from less than 50 in 1895 to 4,223 (estimated) on December 31st, 1901. In a series of transactions, involving over £16,000, two societies have made losses of a trifling sum of about £4.* A very good record for punctuality in repayment of loans has been established. When it is remembered that there are no paid officials in these credit associations, and that all the services of management and control are cheerfully given without reward, the educational value of such organisations cannot be disputed.

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* These "losses," it is worth pointing out, arose, not from any defaults in payments on the part of borrowers, but from certain banks not being able to put into circulation all the capital they possessed.

[TABLE VII,

TABLE VII.—Showing Details as to MEMBERSHIP, LOANS, EXPENSES, PROFIT and

No.	Name of Society and County in which situated.	Membership.	Loan Capital.	Deposits Repaid.	Interest on Loans.	Interest on Deposits.	Loans Granted.	Rules, Fines, and Entrance Fees.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	Doneraile, Co. Cork, .	71	210 0 0	—	13 0 1	7 12 0	349 0 0	0 13 6
2	Kyle, Queen's Co., . .	33	67 0 0	—	4 0 10	0 10 0	57 7 0	0 1 0
3	Belmullet, Co. Mayo, .	131	227 0 0	00 0 0	10 9 3	7 16 0	395 13 0	1 6 0
4	Ballindaggin, Co. Wexford.	32	35 19 0	—	0 18 1	0 0 10	44 0 0	0 2 0
5	Blackwater, Co. Wexford,	28	—	—	—	—	—	—
6	Castledockrell, Co. Wexford.	11	—	—	—	—	—	—
7	Burriscarra, Co. Mayo, .	30	50 12 2	—	0 16 8	0 12 2	50 0 0	0 10 0
8	Kilmore-Erris, Co. Mayo,	71	80 0 0	—	0 10 11	0 6 2	79 0 0	1 17 0
9	Enniscoe, Co. Mayo, .	244	040 0 0	7 0 0	24 17 7	14 6 4	965 0 0	—
10	Addergoole, Co. Mayo, .	103	221 0 0	—	3 4 5	2 2 8	221 0 0	1 1 2
11	Carna, Co. Galway, .	*10	—	—	—	—	—	—
12	Rossmuck, Co. Galway, .	23	62 0 0	—	0 12 9	0 11 4	02 0 0	0 9 6
13	Spiddal, Co Galway, .	82	112 0 0	1 0 0	2 1 8	0 19 10	158 10 0	1 14 11
14	Attymass, Co. Mayo, .	65	00 0 0	—	2 6 2	0 7 0	86 0 0	1 10 0
15	Kilcommon, Co. Mayo, .	01	50 0 0	—	0 9 4	0 10 3	39 0 0	0 11 2
16	Killybegs, Co. Donegal, .	22	75 0 0	10 0 0	1 15 10	1 4 2	93 0 0	0 0 6
17	Inver, Co. Donegal, .	65	98 0 0	—	1 6 11	0 19 4	97 0 0	0 19 6
18	Kilmacrennan, Co. Donegal.	34	125 0 0	—	—	—	—	—
19	Cloonkeen, Co. Galway,	32	00 0 0	—	0 18 1	0 12 0	49 10 0	0 12 0
20	Mount Bellew, Co. Galway.	43	73 4 4	20 0 0	2 0 0	1 14 10	135 10 0	1 7 0
21	Menlough, Co. Galway,	14	—	—	—	—	—	—
22	Glenswilly, Co. Donegal,	—	—	—	—	—	—	—
23	Arran Isles Co. Galway,	77	126 5 1	—	1 0 10	0 17 11	98 5 0	1 2 0
24	Cross, Co. Clare, . .	—	—	—	—	—	—	—
25	Carrigaholt, Co. Clare, .	—	—	—	—	—	—	—
20	Killimor, Co. Clare, . .	10	30 0 0	—	0 2 1	0 2 0	21 0 0	0 5 0
27	Enniscorthy, Co. Wexford.	40	45 0 0	—	1 3 5	0 17 8	73 0 0	1 11 0
28	Moycullen, Co. Galway, .	46	131 0 0	—	1 0 7	0 10 4	127 0 0	0 12 0
29	Clanabogan, Co. Tyrone,	36	44 9 4	—	0 2 4	—	43 0 0	0 18 5
30	Balla and Balcarra, Co. Mayo.	58	50 0 0	—	—	—	—	—
31	Killasser, Co. Mayo, .	17	00 0 0	—	—	—	—	—
32	Geesala, Co, Mayo, . .	109	103 0 0	—	—	—	—	—
33	Abbeydorney, Co. Kerry,	105	300 0 0	—	1 0 2	0 13 0	63 0 0	—
34	Bohola, Co. Mayo, . .	8	—	—	—	—	—	—
35	Lettra, Co. Mayo, . .	38	69 0 0	—	—	—	—	—
36	Abbeyleix, Queen's Co., .	62	265 0 0	—	—	—	—	—
37	Ballyhane, Co. Mayo, .	40	00 0 0	—	—	—	—	—
38	Killeshandra, Co. Cavan,	11	30 0 0	—	—	—	—	—
39	Clare Island, Co. Mayo, .	40	100 0 0	—	—	—	—	—
40	Termon, Co. Donegal, .	7	—	—	—	—	—	—
41	Newcastle, Co. Galway,	6	—	—	—	—	—	—
42	Glan, Co. Galway, . .	*50	100 0 0	—	—	—	—	—
43	Burton Port, Co Donegal,	8	—	—	—	—	—	—
44	Minna, Co. Galway, .	27	50 0 0	—	—	—	—	—
45	Kilglass Co. Sligo, . .	10	—	—	—	—	—	—
46	Annaghdown, Co. Galway.	8	—	—	—	—	—	—
47	Mount Partry, Co. Mayo,	28	100 0 0	—	—	—	—	—
48	Burren, Co. Mayo, . .	27	50 0 0	—	—	—	—	—
	TOTALS, . .	2,085	3,820 14 11	93 0 0	70 1 0	44 14 10	3,306 10 0	17 11 9

* Membership

LOSS, &c., of CO-OPERATIVE CREDIT ASSOCIATIONS in IRELAND for the YEAR 1898.

Sundry Expenses	Loans Repaid.	Net Loss.	Net Profit for Year.	Observations.	Name of Society and County in which situated.	No.
£ s. d.	£ s. d.	£ s. d.	£ s. d.			
2 10 8	276 17 3	—	3 15 11	—	Doneraile, Co. Cork.	1
—	51 15 0	—	3 7 10	—	Kyle, Queen's Co.	2
—	236 15 0	—	3 17 3	—	Belmullet, Co. Mayo.	3
1 19 6	11 0 0	1 9 3	—	Limited liability, .	Ballindaggan, Co. Wexford.	4
—	—	—	—	ditto. (no returns),	Blackwater, Co. Wexford.	5
—	—	—	—	ditto. ditto, .	Castledockrell, Co. Wexford.	0
0 5 11	—	—	0 13 7	—	Burriscarra, Co. Mayo.	7
—	—	—	2 1 9	—	Kilmore-Erris, Co. Mayo.	8
—	448 0 0	—	10 11 3	—	Enniscoe, Co. Mayo.	9
0 2 0	—	—	2 0 11	—	Addergoole, Co. Mayo.	10
—	—	—	—	Not yet working (no returns).	Carna, Co. Galway.	11
—	—	—	0 10 11	—	Rossmuck, Co. Galway.	12
0 4 3	60 10 0	—	2 12 6	—	Spiddal, Co. Galway.	13
—	45 0 0	—	2 16 9	Audit on March 31st, .	Attymass, Co. Mayo.	14
—	2 0 0	—	0 10 3	—	Kilcommon, Co Mayo.	15
0 8 4	30 0 0	—	0 16 3	—	Killybegs, Co. Donegal.	16
—	—	—	1 9 1	—	Inver, Co. Donegal.	17
—	—	—	—	Not working in 1898, .	Kilmacreonan, Co. Donegal.	18
0 0 6	6 18 5	—	0 17 7	—	Cloonkeen, Co. Galway.	19
—	60 2 1	—	1 17 2	—	Mount Bellew, Co. Galway.	20
—	—	—	—	Not working in 1898, .	Menlough, Co. Galway.	21
—	—	—	—	Not yet working (no returns).	Glenswilly, Co. Donegal.	22
—	—	—	1 10 11	—	Arran Isles, Co. Galway.	23
—	—	—	—	Not working in 1898 (no returns).	Cross, Co. Clare.	24
—	—	—	—	ditto, . .	Carrigaholt, Co. Clare.	25
0 0 6	—	—	0 4 7	—	Killimer, Co. Clare.	26
1 4 9	17 19 6	—	0 12 6	—	Enniscorthy, Co. Wexford.	27
0 1 9	86 10 0	—	0 11 6	—	Moycullen, Co. Galway.	28
0 16 4	—	—	0 2 6	—	Clanabogan, Co. Tyrone.	29
—	—	—	—	Began working in 1899,	Balla and Balcarra, Co. Mayo.	30
—	—	—	—	ditto, . .	Killasser, Co. Mayo.	31
—	—	—	—	ditto, . .	Geesala, Co. Mayo.	32
—	—	—	0 7 2	—	Abbeydorney, Co. Kerry.	33
—	—	—	—	ditto, . .	Bohola, Co. Mayo.	34
—	—	—	—	ditto, . .	Lettra, Co. Mayo.	35
—	—	—	—	ditto, . .	Abbeyleix, Queen's Co.	36
—	—	—	—	ditto, . .	Ballyhane, Co. Mayo.	37
—	—	—	—	ditto, . .	Killeshandra, Co. Cavan.	38
—	—	—	—	ditto, . .	Clare Island; Co. Mayo.	39
—	—	—	—	ditto, . .	Termon, Co. Donegal.	40
—	—	—	—	ditto, . .	Newcastle, Co. Galway.	41
—	—	—	—	ditto, . .	Glan, Co. Galway.	42
—	—	—	—	ditto, . .	Burton Port, Co. Donegal.	43
—	—	—	—	ditto, . .	Minna, Co. Galway.	44
—	—	—	—	ditto, . .	Kilglass, Co. Sligo.	45
—	—	—	—	ditto, . .	Annaghdown, Co. Galway.	46
—	—	—	—	ditto, . .	Mount Partry, Co. Mayo.	47
—	—	—	—	ditto, . .	Burren, Co. Mayo.	48
7 14 6	1,333 7 3	1 9 3	41 8 1	TOTALS.		

estimated,

TABLE VIII.—Showing Details as to MEMBERSHIP, LOANS, EXPENSES, PROFIT

No.	Name of Society and County.	Membership.	Loan Capital.	Deposits Repaid.	Interest on Loans.	Interest on Deposits.	Loans Granted.	Rules, Fines, and Entrance Fees, &c.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	Doneraile, Co. Cork, ...	71	216 9 10	—	14 14 11	8 11 6	241 0 0	0 5 6
2	Kyle, Queen's Co., ...	33	66 0 0	—	4 4 2	2 7 8	66 7 0	—
3	Belmullet, Co. Mayo, ...	131	197 0 0	55 0 0	14 14 4	10 17 3	271 0 0	1 10 0
4	Ballindaggin, Co. Wexford.	32	13 1 8	—	1 10 4	—	56 0 0	-
5	Blackwater, Co. Wexford.	28	—	—	—	—	—	—
6	Castledockrell, Co. Wexford.	11	—	—	—	—	—	—
7	Burriscarra, Co. Mayo.	30	50 0 0	—	2 17 0	1 5 0	49 10 0	0 0 6
8	Kilmore Erris, Co. Mayo.	91	80 0 0	—	1 16 3	1 16 5	32 0 0	1 14 0
0	Enniscoe, Co. Mayo, ...	244	560 0 0	3 0 0	26 6 3	15 6 8	481 0 0	—
10	Addergoole. Co. Mayo,	103	295 0 0	—	12 4 0	10 10 1	307 0 0	0 13 4
11	Carna, Co. Galway, ...	-	—	—	—	—	—	—
12	Rossmuck. Co. Galway,	23	112 0 0	—	3 6 1	1 16 2	93 0 0	0 11 6
16	Spiddal, Co. Galway, ...	82	112 0 0	—	5 6 6	2 7 0	147 10 0	0 7 6
14	Attymass, Co. Mayo, ...	65	50 0 0	—	6 3 7	1 5 0	104 10 0	0 12 0
15	Kilcommon, Co. Mayo,	51	111 7 0	—	3 13 2	2 1 11	113 10 0	0 10 6
16	Killybegs, Co. Donegal,	22	150 0 0	—	5 8 4	4 6 0	145 0 0	0 5 0
17	Inver, Co. Donegal, ...	65	177 0 0	1 0 0	3 17 9	1 4 0	170 0 0	0 10 0
18	Kilmacrennan, Co. Donegal.	34	125 0 0	—	4 6 5	3 10 11	175 10 0	1 10 0
19	Cloonkeen, Co. Galway,	32	50 0 0	50 0 0	1 0 11	0 12 5	11 0 0	0 1 6
20	Mount Bellew, Co. Galway.	45	69 15 3	—	3 15 6	2 15 6	97 0 0	0 1 5
21	Menlough, Co. Galway,	14	—	—	—	—	—	—
22	Glenswilly, Co. Donegal,	-	—	—	—	—	—	—
23	Arran Isles, Co. Galway,	77	141 5 1	—	0 16 0	4 1 0	199 15 0	0 14 6
24	Cross, Co. Clare, ...	-	—	—	—	—	—	—
25	Carrigaholt, Co. Clare,	-	—	—	—	—	—	—
26	Killimer, Co. Clare, ...	10	34 10 0	1 10 0	1 18 9	1 0 3	44 12 0	0 7 0
27	Enniscorthy, Co. Wexford.	45	50 0 0	5 0 0	2 7 6	1 17 3	139 0 0	2 2 0
28	Moycullen, Co. Galway,	47	200 0 0	31 0 0	0 7 3	7 13 0	410 10 0	0 12 6
29	Clonabogan, Co. Tyrone,	38	131 7 11	—	6 5 8	3 17 10	185 0 0	0 5 6
30	Balla and Balcarra, Co. Mayo.	58	50 0 0	—	2 2 5	1 8 6	78 10 0	1 5 6
81	Killasser, Co. Mayo, ...	17	50 0 0	—	1 11 11	1 4 4	61 0 0	0 4 6
32	Geesala, Co. Mayo, ...	109	102 18 0	60 0 0	6 3 4	2 6 10	216 0 0	3 1 0

and Loss, &c., of Co-operative Credit Associations in Ireland for the year 1899.

Sundry Expenses.	Loans Repaid.	Net Loss.	Net Profit previous years.	Net Profit for Year.	Observations.	Name of Society and County.	No.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.			
1 6 6	247 4 5	—	3 15 11	5 2 4	—	Doneraile, Co. Cork, ...	1
—	62 17 0	—	3 7 10	1 16 6	—	Kyle, Queen's Co., ...	2
1 1 7	301 16 0	—	3 17 3	4 11 6½	—	Belmullet, Co. Mayo, ...	3
6 3 6	81 0 6	—	—	1 16 4	—	Ballindaggin, Co. Wexford.	4
—	—	—	—	—	In abeyance, ...	Blackwater, Co. Wexford.	5
—	—	—	—	—	do. ...	Castledockrell, Co. Wexford.	6
—	48 0 0	—	6 13 7	1 12 6	—	Burriscarra, Co. Mayo,	7
0 16 6	72 17 0	—	2 1 9	1 3 10	—	Kilmore Erris, Co. Mayo.	8
1 17 0	446 0 6	—	16 11 3	8 19 7	—	Enniscoe, Co. Mayo, ...	9
0 5 7	229 0 0	—	2 0 11	2 2 5	—	Addergoole, Co. Mayo,	16
—	—	—	—	—	In abeyance, ...	Carna, Co. Galway, ...	11
6 10 0	62 0 0	—	0 10 11	1 9 5	—	Rossmnck, Co. Galway,	12
6 13 6	118 6 6	—	2 12 6	2 16 2	—	Spiddal, Co. Galway, ...	13
—	105 0 0	—	1 18 8	2 16 7	—	Attymass, Co. Mayo, ...	14
0 2 6	93 16 0	—	6 16 3	2 7 3	—	Kilcommon, Co. Mayo,	15
0 9 9	107 6 0	—	6 16 3	0 18 4	—	Killybegs, Co. Donegal,	16
1 14 8	119 0 6	—	1 9 1	2 3 11	—	Inver, Co. Donegal, ...	17
0 1 6	90 16 6	—	—	2 12 0	—	Kilmacrennan, Co. Donegal.	18
0 9 5	53 11 7	—	6 17 7	6 9 5	—	Cloonkeen, Co. Galway,	19
0 4 2	97 17 6	—	1 17 2	0 17 4	—	Mount Bellew, Co. Galway.	26
—	—	—	—	—	—	Menlough, Co. Galway,	21
—	—	—	—	—	In abeyance, ...	Glenswilly, Co. Donegal,	22
—	152 15 6	—	1 10 11	3 6 6	—	Arran Isles, Co. Galway,	23
—	—	—	—	—	In abeyance, ...	Cross, Co. Clare, ...	24
—	—	—	—	—	do., ...	Carrigaholt, Co. Clare,	25
0 5 2	31 2 0	—	6 4 7	6 11 4	—	Killimer, Co. Clare, ...	26
1 9 16	95 13 3	—	0 12 5	1 2 4	—	Enniscorthy, Co. Wexford.	27
0 3 6	349 6 0	—	6 11 6	2 3 2	—	Moycullen, Co. Galway,	28
1 14 5	100 0 6	—	0 2 6	6 19 2	—	Clonabogan, Co. Tyrone,	29
—	38 16 0	—	—	1 19 5	—	Balla and Balcarra, Co. Mayo.	30
0 5 7	42 0 6	—	—	0 5 6	—	Killasser, Co. Mayo, ...	31
—	113 6 6	—	—	4 6 6	—	Geesala, Co. Mayo, ...	32

TABLE VIII.—Showing Details as to MEMBERSHIP, LOANS, EXPENSES, PROFIT

No.	Name of Society and County.	Membership.	Loan Capital.	Deposits Repaid.	Interest on Loans.	Interest on Deposits.	Loans Granted.	Rules, Fines, and Entrance Fees, &c.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
33	Abbeydorney, Co. Kerry,	105	213 7 11	—	18 3 7	9 17 8	342 0 0	2 19 0
34	Bohola, Co. Mayo, ...	8	—	—	—	—	—	—
35	Lettra, Co. Mayo, ...	38	69 0 0	—	2 0 6	1 8 11	73 0 0	0 19 0
36	Abbeyleix, Queen's Co..	62	309 8 0	100 0 0	9 3 7	5 19 4	232 10 0	2 19 0
37	Ballyhaue, Co. Mayo, ...	40	50 0 0	—	2 0 0	1 4 7	46 0 0	1 0 0
38	Killeshandra, Co. Cavan,	11	64 11 8	10 11 3	2 11 4	1 12 11	104 0 0	0 15 0
39	Clare Island, Co. Mayo,	46	100 0 0	—	2 9 10	1 16 6	74 0 0	2 7 0
40	Termon, Co. Donegal, ...	8	—	—	—	—	—	—
41	Newcastle, Co. Galway,	8	—	—	—	—	—	—
42	Glan, Co. Galway, ...	50	100 0 0	50 0 0	1 15 8	0 15 9	49 0 0	0 9 6
43	Burton Port, Co. Donegal.	8	—	—	—	—	—	—
44	Minna, Co. Galway, ...	27	50 0 0	—	1 6 1	0 18 0	101 0 0	0 14 0
45	Kilglass, Co. Sligo. ..	—	—	—	—	—	—	—
40	Annaghdown, Co. Galway.	8	—	—	—	—	—	—
47	Mount Partry, Co Mayo,	37	100 0 0	—	1 2 9	1 5 7	65 10 0	0 15 6
48	Burren, Co. Mayo, ...	20	50 0 0	—	1 18 4	0 17 5	53 15 0	0 16 6
40	Carraive, Co. Galway,	—	—	—	—	—	—	—
50	Rathkenny, Co. Cavan,	18	30 10 0	—	0 5 9	—	33 5 0	0 9 0
51	Clonbur, Co. Galway, ...	—	—	—	—	—	—	—
52	Boyle, Co Roscommon,	30	10 0 0	—	0 0 2	0 2 0	5 0 0	1 2 6
53	Cloughaneely, Co. Donegal.	19	50 10 0	—	0 6 11	0 7 0	50 10 0	0 0 6
54	Clondahorkey, Co. Donegal.	54	35 0 0	—	0 9 2	0 6 5	30 0 9	1 7 0
55	Newry, District No. 1, Co. Down.	145	237 0 0	—	1 4 7	1 9 6	237 0 0	4 0 0
56	Killea, Co. Waterford,	18	35 0 0	—	—	—	—	—
57	Glen of Aherlow, Co. Tipperary.	—	—	—	—	—	—	—
58	Moore, Co. Roscommon,	24	40 0 0	—	0 2 4	0 0 8	28 0 0	0 6 6
59	Whitecross, Co. Armagh,	—	—	—	—	—	—	—
60	Cranmore, Co. Galway,	41	150 0 0	—	—	—	130 0 0	0 19 6
61	Ring, Co. Waterford, ...	12	—	—	—	—	—	—
	TOTALS, ...	2,461	4,898 2 2	357 1 3	186 10 10½	123 0 0	0,550 0 0	41 1 10

and Loss, &c., of Co-operative Credit Associations in Ireland for the year 1899.

Sundry Expenses.	Loans Repaid.	Net Loss.	Net Profit previous Years.	Net Profit for Year.	Observations.	Name of Society and County.	No.
£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*			
1 5 3	136 16 0	—	0 7 2	4 19 8	—	Abbeydorney, Co. Kerry	33
—	—	—	—	—	In abeyance, ...	Bobola, Co. Mayo, ...	34
—	63 0 0	—	—	1 10 7	—	Lettra, Co. Mayo, ...	35
4 17 3	126 15 0	—	—	1 6 6	—	Abbeyleix, Queen's Co.,	36
0 4 0	—	—	—	1 11 10	—	Ballybane, Co. Mayo, ...	37
0 12 10	42 0 0	—	—	1 0 7	—	Killeshandra, Co. Cavan,	38
—	24 0 0	—	—	3 0 4	—	Clare Island, Co Mayo,	39
—	—	—	—	—	In abeyance, ...	Termon, Co. Donegal, ...	40
—	—	—	—	—	do. —	Newcastle, Co. Galway,	41
0 7 0	13 0 0	—	—	1 2 5	—	Glan, Co. Galway, ...	42
—	—	—	—	—	In abeyance, ...	Burton Port, Co. Donegal,	43
0 1 8	50 0 0	—	—	1 0 10	—	Minna, Co. Galway, ...	44
—	—	—	—	—	In abeyance, ...	Kilglass, Co. Sligo, ...	45
—	—	—	—	—	do. ...	Annaghdown, Co. Galway.	46
0 1 9	—	—	—	0 10 11	—	Mount Partry, Co. Mayo,	47
0 18 5	4 5 0	—	—	0 15 11	—	Burren, Co. Mayo, ...	48
—	—	—	—	—	Not began work, 1899.	Carraive, Co. Galway,	49
0 3 1	2 10 0	—	—	0 12 2	—	Rathkenny, Co. Cavan,	50
—	—	—	—	—	Not began work, 1899.	Clonbur, Co. Galway,	51
0 1 0	—	—	—	0 19 8	—	Boyle, Co. Roscommon,	52
0 2 0	—	—	—	0 6 11	—	Cloughaneely, Co. Donegal.	53
0 4 2	—	—	—	1 5 7	—	Clondahorkey, Co. Donegal.	54
0 11 1	—	—	—	3 4 0	From 16th Nov. to 31st Dec	Newry District, No. 1, Co. Down.	55
—	—	—	—	—	Began work this year.	Killea, Co. Waterford,	56
—	...	—	—	—	do. ...	Glen of Aberlow, Co. Tipperary.	57
0 0 6	—	—	—	0 1 8	—	Moore, Co. Roscommon,	58
—	—	—	—	—	Began work this year	Whitecross, Co. Armagh,	59
0 1 2	—	—	—	0 18 4	—	Oranmore, Co. Galway,	60
—	—	—	—	—	Began work this year.	Ring, Co. Waterford, ...	61
22 19 4	3,713 3 9	—	*40 10 0	79 19 3½	Totals.		

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* The profit to end of 1898 is shown in Table VII, as £41 8*s.* 1*d.*, the difference being accounted for by 18*s.* 1*d.*, extra profit being shown for No. 14, Attymass, whose figures were then taken up to 31st March, 1899.

TABLE IX.—Showing Details as to MEMBERSHIP, LOANS, EXPENSES, PROFIT and

No.	Name of Society and County in which situated.	Membership.	Loan Capital.	Deposits Repaid.	Interest on Loans.	Interest on Deposits.	Loans Granted.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	Doneraile, Co. Cork, ...	71					
2	Kyle, Queen's County, ...	33	66 0 0	—	4 12 1	1 17 4	56 10 0
3	Belmullet, Co. Mayo, ...	144	247 0 0	50 0 0	15 4 11½	8 11 11	268 10 0
4	Ballindaggan, Co. Wexford,	32	—	—	—	—	—
5	*Blackwater, Co. Wexford, ...	28	—	—	—	—	—
6	*Castledockrell, Co. Wexford,	11	—	—	—	—	—
7	Burriscarra, Co. Mayo, ...	45	100 0 0	—	3 3 6	2 6 1	60 0 0
8	Kilmore-Erris, Co. Mayo, ...	91	100 8 9½	—	5 6 7½	1 1 7	72·14 0
0	Enniscoe, Co. Mayo, ...	244	540 0 0	173 0 0	29 2 0	16 5 2	595 0 0
10	Addergoole, Co Mayo, ...	76	304 0 0	—	17 1 1	11 3 3	298 0 0
11	Rossmuck, Co. Galway, ...	54	131 6 7	—	5 2 0½	2 0 5	129 0 0
12	Spiddall, Co. Galway, ...	89	162 0 0	—	8 10 0	3 12 1	187 0 0
13	Attymas, Co. Mayo, ...	29	104 0 0	—	3 1 2	1 11 2	103 10 0
14	Kilcommon, Co. Mayo, ...	51	125 18 10	5 6 0	7 1 5	2 15 10	256 0 0
15	Killybegs, Co. Donegal, ...	35	185 0 0	—	9 1 5½	6 7 0	207 0 0
16	Inver, Co. Donegal, ...	85	159 0 0	35 0 0	9 1 0½	4 11 10	141 0 0
17	Kilmacrennan, Co. Donegal,	34	85 0 0	40 0 0	5 9 7	2 0 6	148 0 0
18	*Cloonkeen, Co. Galway, ...	-	—	—	—	—	—
19	Mount Bellew, Co. Galway,	45	35 0 0	—	3 18 0	2 15 7	75 0 0
20	*Monlough, Co. Galway, ...	14	—	—	—	—	—
21	*Glenswilly, Co. Donogal, ...	-	—	—	—	—	—
22	Arran Isles, Co. Galway, ...	77	237 5 1	36 0 0	10 11 10	6 1 3	317 0 0
23	Cross, Co. Clare, ...	7	—	—	—	—	—
24	Carrigaholt, Co. Clare, ...	7	—	—	—	—	—
25	Killimer, Co. Clare, ...	24	30 0 0	14 10 0	2 4 0	1 14 10	31 0 0
20	Enniscorthy, Co. Wexford,...	45	62 0 3	0 13 0	4 16 2	3 10 11	164 10 0
27	Moycullen, Co. Galway, ...	60	250 0 0	200 0 0	12 14 6	8 6 8	590 10 0
28	Clanabogan, Co. Tyrone, ...	47	175 10 3	—	0 6 0½	6 4 9	236 0 0
29	Balla & Balcarra, Co. Mayo,	58	50 0 0	—	2 14 8	1 5 0	52 14 3
30	Killassor, Co. Mayo, ...	19	50 0 0	—	2 1 3	1 5 0	61 0 0
31	Geesala, Co. Mayo,... ...	193	102 18 0	60 0 0	0 10 3	8 7 4	265 0 0
32	Abbeydorney, Co. Kerry, ...	105	296 2 11	187 9 0	12 19 8	9 15 0	262 0 0
33	*Bohola, Co. Mayo, ...	7	—	—	—	—	—
34	Lettra, Co. Mayo, ...	49	55 0 0	14 0 0	1 15 10	1 4 11½	76 0 0
35	Abbeyleix, Queen's Co., ...	97	—	315 7 4	0 16 6½	6 15 8	116 0 0
36	Ballyhane, Co. Mayo, ...	46	63 10 0	50 0 0	2 13 4	1 16 2	62 0 0
37	Killeshandra, Co. Cavan, ...	40	158 1 1	0 5 0	7 11 11	4 16 11	230 0 6
38	Clare Island, Co. Mayo, ...	104	100 0 0	—	3 10 6	2 10 0	88 6 0
39	*Termon, Co. Donega ..	7	—	—	—	—	—

* No returns.

LOSS, &c., of CO-OPERATIVE CREDIT ASSOCIATIONS in IRELAND for the Year 1900.

Rules, Fines, and Entrance Fees.	Sundry Expenses.	Loans Repaid.	Net Loss.	Net Profit, previous Years.	Net Profit, 1900.	Name of Society and County in which situated.	No.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		
						Doneraile, Co. Cork, ...	1
—	0 5 0	59 0 0	—	10 7 6	2 9 9	Kyle, Queen's County, ...	2
0 18 6	0 2 11	277 10 0	—	6 7 4½	7 8 7½	Belmullet, Co. Mayo, ...	3
—	—	—	—	—	—	Ballindaggan, Co. Wexford,	4
—	—	—	—	—	—	*Blackwater, Co. Wexford, ...	5
—	—	—	—	—	—	*Castledockrell, Co. Wexford,	6
—	—	51 10 0	—	2 6 1	0 17 5	Burriscarra, Co. Mayo, ...	7
1 2 0	0 2 6	79 0 0	—	4 11 2½	5 4 8½	Kilmore-Erris, Co. Mayo, ...	8
—	1 11 5	599 0 0	—	19 10 10	11 5 5	Enniscoe, Co. Mayo, ...	9
0 3 6	0 9 3½	300 0 0	—	4 3 4	5 12 0½	Addergoole, Co. Mayo, ...	10
0 8 0	0 10 2	98 15 0	—	2 0 4	2 19 5½	Rossmuck, Co. Galway, ...	11
0 7 5	0 13 8	156 0 0	—	5 5 8½	4 12 5	Spiddall, Co. Galway, ...	12
0 2 6	—	80 0 0	—	4 9 3	1 12 5	Attymas, Co. Mayo, ...	13
0 19 0	0 12 5	223 10 0	—	2 17 6	4 12 1	Kilcommon, Co. Mayo, ...	14
0 5 6	0 4 4½	176 0 0	—	1 14 7	2 14 10	Killybegs, Co. Donegal, ...	15
0 5 0	0 10 6½	152 10 0	—	3 13 0	4 3 8	Inver, Co. Donegal, ...	16
0 12 0	0 11 6	145 2 0	—	2 12 0	8 9 7	Kilmacrennan, Co. Donegal,	17
—	—	—	—	—	—	*Cloonkeen, Co. Galway, ...	18
0 0 6	0 6 0	105 15 0	—	2 14 6	0 18 6	Mount Bellew, Co. Galway,	19
—	—	—	—	—	—	*Menlough, Co. Galway, ...	20
—	—	—	—	—	—	*Glenswilly, Co. Donegal, ...	21
0 9 0	0 5 2	234 10 0	—	4 17 6	4 14 5	Arran Isles, Co. Galway, ...	22
—	—	—	—	—	—	Cross, Co. Clare, ...	23
—	—	—	—	—	—	Carrigaholt, Co. Clare, ...	24
0 0 7	0 7 7	36 7 0	—	0 15 11½	0 2 2	Killimer, Co. Clare, ...	25
1 4 0	0 14 5	145 19 6	—	1 2 4½	1 4 10½	Enniscorthy, Co. Wexford,	26
0 5 0	0 8 4	546 10 0	—	2 14 8½	4 4 5	Moycullen, Co. Galway, ...	27
0 4 6	1 10 6	191 0 0	—	1 1 8½	1 16 0½	Clanabogan, Co. Tyrone, ...	28
0 7 0	0 5 0	54 13 2	—	1 19 5	1 11 8	Balla & Belcarra, Co. Mayo,	29
0 5 0	0 12 10	50 0 0	—	0 5 5	0 8 6	Killasser, Co. Mayo, ...	30
1 15 3	0 6 0	259 0 0	—	4 0 6	4 13 2	Geesala, Co. Mayo, ...	31
—	—	190 1 0	—	4 19 8	3 4 8	Abbeydorney, Co. Kerry, ...	32
—	—	—	—	—	—	*Bohola, Co. Mayo, ...	33
0 5 5	—	55 0 0	—	1 10 6½	0 10 4½	Lettra, Co. Mayo, ...	34
0 16 0½	1 18 2	221 15 0	—	1 5 6	1 18 9	Abbeyleix, Queen's County,	35
0 3 0	0 7 4	46 0 0	—	1 11 10	0 12 10	Ballyhane, Co. Mayo, ...	36
0 14 8	0 11 9	133 3 4	—	1 0 7	2 17 11	Killeshandra, Co. Cavan, ...	37
0 6 0	0 5 0	78 10 0	—	8 0 4½	1 9 6	Clare Island, Co. Mayo, ...	38
—	—	—	—	—	—	*Termon, Co. Donegal, ...	39

TABLE IX.—Showing Details as to MEMBERSHIP, LOANS, EXPENSES, PROFIT and

No.	Name of Society and County in which situated.	Membership.	Loan Capital.	Deposits Repaid.	Interest on Loans.	Interest on Deposits.	Loans Granted.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
40	*Newcastle, Co. Galway. ...	7	—	—	—	—	—
41	Glan, Co. Galway, ...	20	100 0 0	—	3 17 11	1 4 6	66 10 0
42	*Burton Port, Co. Donegal, ...	7	—	—	—	—	—
43	Minna, Co. Galway, ...	45	110 0 0	—	4 14 10½	2 13 4	112 10 0
44	*Killyglass, Co. Sligo, ...	-	—	—	—	—	—
45	*Annaghdown, Co. Galway,...	-	—	—	—	—	—
46	Mount Partry, Co. Mayo, ...	38	100 0 0	—	4 7 1	2 10 0	115 8 0
47	Burren, Co. Mayo, ...	64	140 0 0	—	0 12 3	2 18 5	257 10 0
48	*Carraroe, Co. Galway, ...	7	—	—	—	—	—
49	Rathkenny, Co. Cavan, ...	21	25 18 2	5 17 7	1 5 0½	0 15 0	25 10 0
50	Clonbur, Co. Mayo, ...	7	50 0 0	—	—	—	—
51	†Boyle, Co. Roscommon, ...	30	—	—	—	—	—
52	Cloughaneely, Co. Donegal,	27	102 0 0	—	2 7 7	1 10 10	92 0 0
53	Clon lahorkey, Co. Donegal,	60	87 10 0	—	4 4 5	2 17 10	100 0 0
54	Newry District, Co. Down (No. 1).	145	257 19 3	—	16 4 5½	18 13 0	162 0 0
55	Killea, Co. Waterford, ...	18	45 0 0	—	0 12 2	1 2 0	23 0 0
56	*Glen of Aherlow, Co. Tipperary.	7	—	—	—	—	—
57	Moore, Co. Roscommon, ...	15	12 0 0	28 0 0	1 15 8	1 5 4	15 0 0
58	*Whitecross, Co. Armagh, ...	7	—	—	—	—	—
59	Cranmore, Co. Galway, ...	45	232 4 0	150 0 0	8 10 11½	0 4 0	235 0 0
60	Ring, Co. Waterford, ...	12	10 0 0	—	0 4 0	0 2 0	10 0 0
61	Letiermore, Co. Galway, ...	16	55 0 0	—	1 1 11	0 5 0	52 10 0
62	Murneen, Co. Mayo, ...	40	55 0 0	—	1 0 11½	1 4 0	55 0 0
63	Castlecaulfield, Co. Tyrone,	20	203 0 0	88 0 0	0 10 1½	5 5 10	330 7 8
64	†Kilvine and Ballindone, Co. Mayo.	7	50 0 0	—	—	—	—
65	Bekan, Co. Mayo, ...	20	100 0 0	—	2 7 7	1 14 0	129 5 1
66	Crimlin, Co. Mayo, ...	7	—	—	—	—	—
67	Castlecomer, Co. Kilkenny,	64	155 0 0	—	2 6 9	2 17 8	164 0 0
68	Glenhest, Co. Mayo, ...	35	126 0 0	—	0 17 0	1 4 7	125 0 0
69	Bangor-Erris, Co. Mayo, ...	88	50 0 0	—	0 17 8	0 18 11	50 0 0
70	Ballintrillick, Co. Sligo, ...	7	—	—	—	—	—
71	Cliff, Co. Sligo, ...	7	—	—	—	—	—
72	‡Logboy, Co. Mayo, ...	7	55 0 0	—	—	—	—
73	Kilrea Dairy, Co. Londonderry.	7	—	—	—	—	—
74	‡Clogher, Co. Donegal, ...	7	50 0 0	—	—	—	—
75	‡Cloonfad, Co. Mayo, ...	7	50 0 0	—	—	—	—
70	Townavilly, Co. Donegal, ...	7	50 0 0	—	—	—	—
	TOTALS	3,138	6,247 5 11	1,459 8 8	280 0 0	180 7 5	7,270 2 0

* No returns. † Not working. ‡ 1001.

Loss, &c., of Co-operative Credit Associations in Ireland for the year 1900.

Rules, Fines, and Entrance Fees.	Sundry Expenses	Loans Repaid.	Net Loss.	Net Profit, previous Years	Net Profit, 1900.	Name of Society and County in which situated.	No.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		
—	—	—	—	—	—	*Newcastle, Co. Galway, ...	40
0 5 0	0 14 2	35 10 0	—	1 2 5	2 4 3	Glan, Co. Galway, ...	41
—	—	—	—	—	—	*Burton Port, Co. Donegal, ...	42
0 0 0	0 7 1	52 10 0	—	1 0 10½	2 3 5½	Minna, Co. Galway, ...	43
—	—	—	—	—	—	*Killyglass, Co. Sligo, ...	44
—	—	—	—	—	—	*Annaghdown, Co. Galway,...	45
0 3 6	0 7 5	86 6 0	—	0 10 11	1 13 2	Mount Party, Co. Mayo, ...	46
1 4 4	3 15 2	176 15 0	—	0 15 11	0 5 7	Burren, Co. Mayo, ...	47
—	—	—	—	—	—	*Carraroe, Co. Galway, ...	48
0 3 1	0 7 10½	32 5 0	—	0 12 2	0 5 3	Rathkenny, Co. Cavan, ...	40
—	—	—	—	—	—	Clonbur, Co, Mayo, ...	50
—	—	—	—	—	—	†Boyle, Co. Roscommon, ...	51
0 4 0	0 7 0	50 10 0	—	0 6 11	0 13 0	Cloughaneely, Co. Donegal,	52
0 8 0	0 12 0	82 0 0	—	1 5 7	1 2 7	Clondahorky, Co. Donegal,...	53
0 8 0	0 7 0	246 0 0	2 5 4½	3 4 0	—	Newry District, Co. Down (No. 1).	54
0 5 6	—	8 0 0	0 4 10 [3s. from '99.]	—	—	Killen, Co. Waterford, ...	55
—	—	—	—	—	—	*Glen of Aherlow, Co. Tipperary.	56
0 1 0	0 6 9	31 0 0	—	0 1 8	0 4 7	Moore, Co. Roscommon, ...	57
—	—	—	—	—	—	*Whitecross, Co. Armagh, ...	58
0 12 5	0 17 5	142 0 0	—	0 18 4	2 11 0½	Oranmore, Co. Galway, ...	59
0 6 0	—	1 10 0	—	—	0 7 9	Ring, Co. Waterford, ...	60
0 8 0	0 0 7	11 10 0	—	—	1 4 4	Lettermore, Co. Galway, ...	61
1 11 7½	0 8 8	3 0 0	—	—	1 5 11	Murneen, Co. Mayo, ...	62
0 10 0	0 7 10	126 18 1	—	—	1 6 5½	Castlecaulfield, Co. Tyrone,	63
—	—	—	—	—	—	†Kilvine and Ballindone, Co. Mayo.	64
0 10 0	0 10 2	40 10 0	—	—	0 13 6	Bekan, Co. Mayo, ...	65
—	—	—	—	—	—	Crimlin, Co. Mayo, ...	66
1 15 0	0 4 2	32 0 0	—	—	0 10 11	Castlecomer, Co. Kilkenny,	67
0 17 6	0 5 0	—	—	—	1 14 1	Glenhest, Co. Mayo, ...	68
2 3 0	1 4 5	—	—	—	1 2 4	Bangor-Erris, Co. Mayo, ...	69
—	—	—	—	—	—	Ballintrillick, Co. Sligo, ...	70
—	—	—	—	—	—	Cliff, Co, Sligo, ...	71
—	—	—	—	—	—	‡Logboy, Co. Mayo, ...	72
—	—	—	—	—	—	Kilrea Dairy, Co. Londonderry.	73
—	—	—	—	—	—	‡Clogher, Co. Donegal, ...	74
—	—	—	—	—	—	‡Cloonfad, Co. Mayo, ...	75
—	—	—	—	—	—	Townavilly, Co. Donegal, ...	76
24 3 6	24 12 7	5,899 5 1	2 11 2	112 10 1	107 14 0	TOTALS.	

II. RAILWAYS.

The receipts of Irish Railways, week by week, for the year 1901 have been supplied to this Department by the authorities of the several Companies, and will be found tabulated in Table X., and compared with the receipts for the year 1900. This Table does not include the returns of the Light Railways of Ireland.

A review of the weekly traffic returns shows that in 22 weeks the receipts exceeded those for the corresponding weeks of the year 1900, and in 30 weeks the receipts were below those for the corresponding periods, with the net result that in the year there was a decrease of £12,591, or 0·3 per cent., as compared with the amount received in the preceding year. The total receipts for the year 1901 (52 weeks) were £3,668,427, as against £3,681,018 in 1900, £3,600,293 in 1899, £3,493,389 in 1898, £3,442,036 in 1897, £3,387,409 in 1896, £3,368,282 in 1895, £3,303,739 in 1894, £3,181,043 in 1893, £3,103,651 in 1892, and £3,147,458 in 1891, when the receipts were higher than those for any previous year.

This Report includes a statistical record—Tables XI., XII., and XIII.—of Irish Railways for each year since 1871, which, so far as the figures go, gives a history of railway development in Ireland since that date. These figures are compiled from the annual statistical returns furnished by the several railway Companies to the Board of Trade in accordance with the requirements of the Regulations of Railways Act, 1871, and are worthy of attention from many points of view. For example, the following statements compiled from these Tables as to the Receipts of Irish Railways bring out interesting results as to the growth or decline of the various classes of traffic in an interval of thirty years.

IRISH RAILWAY RECEIPTS per MILE for Passenger and Goods Traffic in 1871 compared with 1900.

Kind of Traffic.	Receipts per Mile.		Increase or Decrease.
	1871.	1900.	
	£	£	
Passenger Traffic, .	630	639	Increase, £9, or 1·4 per cent.
All Goods Traffic, .	489	534	Increase of £45, or 9·2 per cent.
Merchandise, .	367	377	Increase of £10, or 2·7 per cent.
Live Stock, . .	92	97	Increase of £5, or 5·4 per cent.
Minerals, . .	29	61	Increase of £32, or 110·3 per cent.
Total Receipts from all sources of Traffic.	1,143	1,196	Increase, £53, or 4·6 per cent.

GROSS RECEIPTS of IRISH RAILWAYS in 1871 compared with 1900.

Kind of Traffic.	Total Receipts.		Increase.
	1871.	1900.	
	£	£	
Passenger Traffic (including excess Luggage, Mails, &c.)	1,252,530	2,034,717	£782,187, or 62·4 per cent.
Passengers alone (including Season Ticket Holders).	1,070,730	1,591,819	£521,089, or 48·7 per cent.
All Goods Traffic, .	971,149	1,698,909	£727,760, or 74·9 per cent.
Merchandise, .	729,816	1,198,534	£468,718, or 64·2 per cent.
Live Stock, . .	183,306	307,165	£123,859, or 67·6 per cent.
Minerals, . .	58,027	193,210	£135,183, or 233·0 per cent.
Total Receipts from all sources of Traffic.	2,272,386	3,806,347	£1,533,961, or 67·5 per cent.

Another aspect of the development of the traffic of the Irish Railway systems is shown in the following statements.

A.—STATEMENT showing the PASSENGER TRAFFIC, arranged according to CLASSES, on Irish Railways in the years 1871, 1891, and 1900.

Year.	No. of Passengers.	Per-centage of Passengers in each Class.			No. of Journeys per Head of Population.	No. of Passengers per mile of Lines open.
		1st.	2nd.	3rd.		
1871,	15,547,934	12·5	27·8	59·7	2·9	7,821
1891,	22,202,258	6·8	18·9	74·3	4·7	7,755
1900,	27,649,815	5·4	14·2	80·4	6·2 Estimated Population.	8,687

B.—STATEMENT showing the GOODS TRAFFIC on Irish Railways in the years 1871 and 1900.

Year.	Mileage of Lines open.	Gross Tonnage Carried.		Tons carried per Mile of Lines open.	
		General Merchandise.	Minerals.	General Merchandise.	Minerals.
1871,	1,988	2,441,289	472,326	1,228	238
1900,	3,183	3,637,834	1,513,476	1,143	475

The decline in First and Second Class passenger traffic, and the increase in Third Class passenger traffic are remarkable. In regard to the column in the Statement A. showing the "Number of Passengers per Mile of Lines open," it ought to be borne in mind that the mileage of Irish Railways increased between 1871 and 1900 from 1,988 in the former year to 3,183 in the latter, while on the other hand, the population decreased in the same period from 5,412,377 in 1871 to an estimated population of 4,466,326 in 1900. In fact, the column showing the

"Number of Journeys per head of Population" gives the more correct idea of the expansion of the Passenger Traffic on Irish Railways at the different periods. It will be noted in reference to the Goods Traffic returns shown in Statement B. that while the tonnage of "Minerals" carried per mile of lines open has increased in the three decades under review by 237 tons, the tonnage of "General Merchandise" carried shows a serious decline in the thirty years of 85 tons per mile of lines open.*

In regard to the very important question of rates, the following Statements prepared from the Board of Trade returns deserve study. In the year 1900 the average rate per ton on Merchandise carried on the Irish Railways was as much as 37·14 per cent. in excess of the rate charged on the same class of Traffic in England, and 33·97 in excess of the Scotch rate. The average Irish Railway rate per ton for Merchandise in 1900 was higher by nearly 2 per cent. than it was in 1890, while in England the decrease in the former as compared with the latter year was 8·79 per cent., and in Scotland 1·70 :—

STATEMENT showing the AVERAGE RATE per TON on MERCHANDISE carried in ENGLAND, SCOTLAND, and IRELAND in the Years 1880, 1890, and 1900 respectively; and showing EXCESS of IRISH AVERAGE over English and Scotch for the same years :—

YEARS.	Average Rate per Ton on Merchandise carried in			Excess of Irish Average Rate per Ton over	
	England.	Scotland.	Ireland.	English.	Scotch.
	s. d.	s. d.	s. d.		
1880	5 8·35	5 5·50	6 11·27	21·83 per cent.	27·13 per cent.
1890	5 3·87	5 0·67	6 6·40	22·75 "	29·22 "
1900	4 10·26	4 11·64	6 7·90	37·14 "	33·97 "

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* Possibly some of this apparent decline in "General Merchandise" is due to changes in classification of traffic. The general term "Minerals" as applied to Railway traffic usually includes :—Bricks; coal; coal dross or slack; coke; furnace refuse; slag; slates in three ton quantities or upwards; scrap-iron in six ton loads, or in consignments above three cwts.; coarse drain pipes; rough stone undressed, from quarry; stable manure; bog mould; oxide of iron for gas refining; lime; and farm manure other than patent manure in bags.

STATEMENT showing the GROSS TONNAGE, GROSS RECEIPTS, and AVERAGE RECEIPTS per TON of MERCHANDISE carried in ENGLAND, SCOTLAND, and IRELAND in Years 1880, 1890, and 1900.

ENGLAND.[*]

YEAR.	Gross Tonnage.	Gross Receipts.	Average Rate per Ton.
		£	*s.* *d.*
1880	59,415,037	16,922,640	=5 8·35
1890	74,319,330	19,781,087	=5 3·87
1900	102,628,842	24,910,037	=4 10·26
1890 v. 1880	25·08 per cent. Increase	16·80 per cent. Increase	0·56 per cent. Decrease
1900 v. 1880	72·73 per cent. Increase	47·23 per cent. Increase	14·77 per cent. Decrease
1900 v. 1890	38·09 per cent. Increase	25·05 per cent. Increase	8·79 per cent. Decrease

SCOTLAND.

YEAR.	Gross Tonnage.	Gross Receipts.	Average Rate per Ton.
		£	*s.* *d.*
1880	7,011,503	2,077,400	=5 5·50
1890	9,871,788	2,495,811	=5 0·07
1900	12,273,754	3,050,537	=4 11·64
1890 v. 1880	29·69 per cent. Increase	20·14 per cent. Increase	7·38 per cent. Decrease
1900 v. 1880	61·25 per cent. Increase	46·84 per cent. Increase	8·95 per cent. Decrease
1900 v. 1890	24·33 per cent. Increase	22·22 per cent. Increase	1·70 per cent. Decrease

IRELAND (EXCLUDING LIGHT RAILWAYS).

YEAR.	Gross Tonnage.	Gross Receipts.	Average Rate per Ton.
		£	*s.* *d.*
1880	2,596,300	900,809	6 11·27
1890	3,102,869	1,013,621	6 0·40
1900	3,549,095	1,181,795	0 7·90
1890 v. 1880	19·51 per cent. Increase	12·52 per cent. Increase	5·86 per cent. Decrease
1900 v. 1880	30·72 per cent. Increase	31·19 per cent. Increase	4·05 per cent. Decrease
1900 v. 1890	14·40 per cent. Increase	10·59 per cent. Increase	1·92 per cent. *Increase*

[*] The figures given for England for the year 1880 are exclusive of Merchandise Traffic carried over the West Lancashire Railway, the Swansea and Mumbles Railway, and the Hoylake and Birkenhead Railway and Tramway, and those for the year 1890 are exclusive of Merchandise Traffic dealt with by the Dover and Deal Committee's Line. In all these cases Minerals have been included with Merchandise Traffic in the Board of Trade Returns from which the statement has been compiled.

There were in the year 1900, according to the Board of Trade returns, seventeen principal Railway Companies in Ireland, and as many as thirty-two subordinate lines, which were either leased to or otherwise controlled by the former. The position of the chief lines, so far as mileage receipts and expenditure are concerned, is given in the following statement, compiled from the official returns just referred to :—

TABLE showing certain Particulars as to MILEAGE, RECEIPTS, and EXPENDITURE of Irish Railways in the Year 1900.*

NAME OF COMPANY.	Length of Line, 1900.	Total Receipts from all sources of Traffic.	Total Working Expenditure.	Proportion per cent. of Expenditure to Receipts.
	Miles.	£	£	
Ballycastle,	16	5,270	3,867	73
Belfast and Co. Down,	76	137,938	80,277	58
Belfast and Northern Counties,	249	318,918	201,564	63
Cork and Macroom,	25	17,254	10,560	61
Cork, Bandon, and South Coast,	94	79,997	49,259	62
Cork, Blackrock, and Passage,	6	19,116	16,505	86
Donegal Railway,	90	27,461	17,589	64
Dublin, Wicklow, and Wexford,	144	275,115	181,389	66
Dundalk, Newry, and Greenore,	26	17,838	22,196	124
Great Northern of Ireland,	528	911,549	502,566	55
Great Southern and Western of Ireland.	730	1,041,943	616,339	59
Listowel and Ballybunion,	9	2,184	2,195	101
Londonderry and Lough Swilly,	31	21,562	11,732	54
Midland Great Western of Ireland.	538	586,891	323,082	55
Sligo, Leitrim, and Northern Counties.	43	24,647	16,741	68
Waterford and Tramore,	7	6,829	3,251	48
Waterford, Limerick, and Western.	342	251,723	151,298	60

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* This Table does not include the Light Railways authorised under the Tramways (Ireland) Acts, 1860 to 1883, with the exception of four small lines worked by the chief lines and included in the figures of the Table. The lines thus included are—"The Athenry and Tuam Extension to Claremorris"; the "Ballinrobe and Claremorris"; the "Loughrea and Attymon"; and the "Mitchelstown and Fermoy" Light Railways.

The following Comparative Statements show how Irish Railways stand as contrasted with those of the other countries of the United Kingdom. It will be seen from the second Statement that the cost of construction of the Irish Railways, as indicated by the amount of paid-up Capital, has been remarkably low as compared with the cost of those of either England or Scotland.

I.

—	Length of Lines open 31st December, 1900.	Total Receipts, 1900.	Total Expenditure, 1900.	Proportion of Expenditure to Receipts.	Population according to Census of 1901 (unrevised figures).
	Miles.	£	£	Per Cent.	
England and Wales.	15,187	89,392,501	55,882,810	63	32,525,716
Scotland, .	3,485	11,603,010	6,584,215	57	4,471,957
Ireland, .	3,183	3,806,347	2,276,495	60	4,456,546
Total United Kingdom.	21,855	104,801,858	64,743,520	62	41,454,219

II.

—	Share Capital, 1900.	Loans and Debentures, 1900.	Total Paid-up Capital, 1900.
	£	£	£
England and Wales, .	781,934,150	318,107,907	1,095,042,057
Scotland, . . .	123,307,777	39,031,155	162,338,932
Ireland, . . .	31,890,768	13,402,322	45,293,090
Total for United Kingdom.	937,132,695	365,541,384	1,302,674,079

Still more instructive, perhaps, is the following comparison, in certain particulars, of the English Great Western system with the entire Railway system of this country. The comparison would be more satisfactory if an estimate of the population of the districts of England and

Wales served by the Great Western had been available; but as it stands the contrast is sufficiently striking :—

—	Length of Lines open on 31st December, 1900.	Total Passengers conveyed (exclusive of Season and Periodical Tickets).	Goods Traffic.	No. of Miles travelled by Trains.	No. of Passengers per Mile of Lines open.	Total Receipts.	
						Passenger Traffic.	Goods Traffic.
	Miles.		Tons.			£	£
All Irish Railways (including Light Railways).	3,183	27,649,815	5,151,310	17,268,796	8,687	2,034,717	1,598,909
Great Western of England.	2,627	80,944,483	37,500,510	46,415,184	30,813	5,165,067	5,698,049

It may be noted finally, that of the 3,183 miles of the Irish Railway systems 2,557 are single lines, and only 626 double (or more) lines, while in the case of the Great Western of England the proportions are as follows :—Single lines, 1,270; double (or more) lines, 1,357.

TABLE X.—COMPARATIVE Return of Weekly Railway

No. of Week in Annual Series.	Date. Week ending (1901.)	RECEIPTS FOR WEEK.						Miles open.	
		Total		Increase in 1901 as compared with 1900.		Decrease in 1901 as compared with 1900.			
		1900.	1901.	Total.	Per Cent.	Total.	Per Cent.	1900.	1901.
	Friday,	£	£	£		£			
1*	January 4,	56,447	58,494	2,047	3·6	–	–	2,988	2,988
2*	„ 11,	55,815	57,471	1,656	3·0	–	–	„	„
3	„ 18,	58,732	59,800	3,068	5·4	–	–	„	„
4	„ 25,	56,314	59,364	3,050	5·4	–	–	„	„
5	February 1,	58,608	56,727	–	–	1,881	8·2	„	„
6	„ 8,	56,412	58,058	1,846	2·9	–	–	„	„
7	„ 15,	54,062	80,085	6,023	11·1	–	–	„	„
8	„ 22,	58,183	61,113	2,930	5·0	–	–	„	„
9	March 1,	63,472	66,163	2,691	4·2	–	–	„	„
10	„ 8,	82,212	61,740	–	–	472	0·8	„	„
11	„ 15,	88,541	64,681	1,120	1·8	–	–	„	„
12	„ 22,	83,920	65,567	1,647	2·6	–	–	„	„
13	„ 29,	84,017	63,100	–	–	917	1·4	„	„
14	April 5,	76,510	66,516†	–	–	9,994	13·1	„	„
15	„ 12,	65,941	74,361	8,420	12·8	–	–	„	„
18	„ 19,	78,114†	69,171	–	–	8,943	11·4	„	„
17	„ 26,	70,320	65,380	–	–	4,940	7·0	„	„
18	May 3,	78,009	75,290	–	–	719	0·9	„	„
19	„ 10,	72,012	70,318	–	–	1,694	2·4	„	„
20	„ 17,	70,012	69,544	–	–	468	0·7	„	„
21	„ 24,	70,003	88,593‡	–	–	1,410	2·0	„	„
22	„ 31,	74,343	75,218	875	1·2	–	–	„	„
23	June 7,	73,733‡	88,810	–	–	4,023	6·7	„	„
24	„ 14,	73,519	73,006	–	–	513	0·7	„	„
25	„ 21,	75,014	72,820	–	–	2,194	2·9	„	„
26*	„ 28,	78,010	82,173	4,103	5·3	–	–	„	„
27*	July 5,	77,782	78,787	1 005	1·3	–	–	„	„
28	„ 12,	82,413	82,071	–	–	342	0·4	„	„
29	„ 19,	77,646	79,919	2,273	2·0	–	–	„	„
30	„ 28,	76,973	77,037	04	0·1	–	–	„	„
31	August 2,	81,913	83,271	1,358	1·7	–	–	„	„
32	„ 9,	79,097	83,950	3,959	4·9	–	–	„	„
33	„ 16,	82,827	82,620	–	–	207	0·2	„	„
34	„ 23,	83,956	85,054	1,098	1·3	–	–	„	„
35	„ 30,	91,112	89,099	–	–	2,013	2·2	„	„
86	September 6,	81,977	84,746	2,709	3·4	–	–	„	„
37	„ 13,	79,572	78,299	–	–	1,273	1·8	„	„
88	„ 20,	79,340	77,509	–	–	1,831	2·3	„	„
89	„ 27,	80,930	77,914	–	–	3,016	3·7	„	„
40	October 4,	82,517	81,618	–	–	800	1·1	„	„
41	„ 11,	75,700	75,107	–	–	593	0·8	„	„
42	„ 18,	74,108	71,331	–	–	2,777	3·7	„	„
43	„ 25,	71,600	69,702	–	–	1,808	2·5	„	„
44	November 1,	72,623	71,705	–	–	918	1·3	„	„
45	„ 8,	68,145	86,899	–	–	1,440	2·1	„	„
46	„ 15,	66,770	62,576	–	–	4,194	6·3	„	„
47	„ 22,	65,490	04,656	–	–	834	1·3	„	„
48	„ 29,	66,356	06,559	203	0·3	–	–	„	„
49	December 6,	63,396	62,884	–	–	512	0·8	„	„
50	„ 13,	66,423	04,245	–	–	2,178	3·3	„	„
51*	„ 20,	67,857	06,595	–	–	1,282	1·9	„	„
52*	„ 27,	60,320	60,835	515	0·9	–	–	„	„

* Owing to the closing of accounts at the end of the calendar half-year, the amounts
Railways do not in all cases represent the receipts

RAILWAYS.

Receipts in Ireland for the Years 1900–1901.

Receipts per Mile.		Aggregate Receipts to date from beginning of Year. Total.		Increase in 1901 as compared with 1900.		Decrease in 1901 as compared with 1900.		Date. Week ending (1901.)	No. of Week in Annual Series.
1900.	1901.	1900.	1901.	Total.	Per Cent.	Total.	Per Cent.		
£	£	£	£	£		£		*Friday.*	
18·9	19·6	56,447	58,494	2,047	3·6	–	–	January 4,	1*
18·7	19·2	112,262	115,965	3,703	3·8	–	–	„ 11,	2*
19·0	20·0	166,994	175,765	8,771	4·0	–	–	„ 18,	3
18·8	19·9	225,308	235,129	9,821	4·4	–	–	„ 25,	4
19·8	19·0	283,916	291,858	7,940	2·8	–	–	February 1,	5
18·9	19·4	340,328	349,914	9,586	2·8	–	–	„ 8,	6
18·1	20·1	394,390	409,999	15,609	4·0	–	–	„ 15,	7
19·5	20·5	452,573	471,112	18,539	4·1	–	–	„ 22,	8
21·2	22·1	516,045	537,275	21,230	4·1	–	–	March 1,	9
20·8	20·7	578,257	599,015	20,758	3·6	–	–	„ 8,	10
21·3	21·8	641,798	663,676	21,878	3·4	–	–	„ 15,	11
21·4	21·9	705,718	729,243	23,525	3·3	–	–	„ 22,	12
21·4	21·1	769,735	792,343	22,608	2·9	–	–	„ 29,	13
25·8	22·3	846,245	858,859	12,614	1·5	–	–	April 5,	14
22·1	24·9	912,186	933,220	21,034	2·3	–	–	„ 12,	15
26·1	23·1	990,300	1,002,391	12,091	1·2	–	–	„ 19,	16
23·5	21·9	1,060,620	1,067,771	7,151	0·7	–	–	„ 26,	17
25·4	25·2	1,136,629	1,143,061	6,432	0·6	–	–	May 3,	18
24·1	23·5	1,208,641	1,213,379	4,738	0·4	–	–	„ 10,	19
23·4	23·3	1,278,658	1,282,928	4,270	0·3	–	–	„ 17,	20
23·4	23·0	1,348,858	1,351,516	2,860	0·2	–	–	„ 24,	21
24·9	25·2	1,422,999	1,426,734	3,735	0·3	–	–	„ 31,	22
24·7	23·0	1,496,732	1,495,544	–	–	1,188	0·1	June 7,	23
24·8	24·4	1,570,251	1,568,550	–	–	1,701	0·1	„ 14,	24
25·1	24·4	1,645,265	1,641,370	–	–	3,895	0·2	„ 21,	25
26·1	27·5	1,723,275	1,723,543	268	–	–	–	„ 28,	26*
28·0	26·4	1,801,057	1,802,330	1,273	0·1	–	–	July 5,	27*
27·8	27·5	1,883,470	1,884,401	931	–	–	–	„ 12,	28
28·0	26·7	1,961,116	1,964,320	3,204	0·2	–	–	„ 19,	29
25·8	25·8	2,038,089	2,041,357	3,268	0·2	–	–	„ 26,	30
27·4	27·9	2,120,002	2,124,628	4,628	0·2	–	–	August 2,	31
26·8	28·1	2,199,999	2,208,584	8,585	0·4	–	–	„ 9,	32
27·7	27·7	2,282,828	2,291,204	8,376	0·4	–	–	„ 16,	33
28·1	28·5	2,366,782	2,376,258	9,476	0·4	–	–	„ 23,	34
30·5	29·8	2,457,894	2,465,357	7,463	0·3	–	–	„ 30,	35
27·4	28·4	2,539,871	2,550,103	10,232	0·4	–	–	September 6,	36
28·6	26·2	2,619,443	2,628,402	8,959	0·3	–	–	„ 13,	37
26·6	25·9	2,698,783	2,705,911	7,128	0·3	–	–	„ 20,	38
27·1	26·1	2,779,713	2,783,825	4,112	0·1	–	–	„ 27,	39
27·8	27·3	2,862,230	2,865,443	3,213	0·1	–	–	October 4,	40
25·3	25·1	2,937,930	2,940,550	2,620	0·1	–	–	„ 11,	41
24·8	23·9	3,012,038	3,011,881	–	–	157	0·0	„ 18,	42
24·0	23·4	3,083,638	3,081,673	–	–	1,965	0·1	„ 25,	43
24·3	24·0	3,156,261	3,153,378	–	–	2,883	0·1	November 1,	44
22·8	22·3	3,224,406	3,220,077	–	–	4,329	0·1	„ 8,	45
22·3	20·9	3,291,176	3,282,653	–	–	8,523	0·3	„ 15,	46
21·9	21·8	3,356,666	3,347,309	–	–	9,357	0·3	„ 22,	47
22·2	22·3	3,423,022	3,413,868	–	–	9,154	0·3	„ 29,	48
21·2	21·0	3,486,418	3,476,752	–	–	9,666	0·3	December 6,	49
22·2	21·5	3,552,841	3,540,997	–	–	11844	0·3	„ 13,	50
22·7	22·3	3,620,698	3,607,592	–	–	13106	0·4	„ 20,	51*
20·2	20·4	3,681,018	3,668,427	–	–	12591	0·3	„ 27,	52*

returned for the 1st, 2nd, 26th, 27th, 51st, and 52nd weeks, respectively, by some of the for *seven* days. † Easter week. ‡ Whit week.

TABLE XI.—Showing the TOTAL AUTHORISED SHARE and LOAN ORDINARY, GUARANTEED, and PREFERENTIAL CAPITAL, and the CAPITAL SUBSCRIBED to other COMPANIES, for each year from

YEAR.	Authorised Capital.			Paid-up Stock and Share Capital.			
	By Shares and Stock	By Loans and Debenture Stock.	Total.	Ordinary.	Guaranteed.	Preferential.	Total Paid-up Stock and Share Capital.
	£	£	£	£	£	£	£
1871, .	23,869,365	7,591,952	31,481,317	14,633,147	509,850	5,540,098	20,683,095
1872, .	26,313,625	9,448,686	35,762,311	15,549,406	468,155	5,708,004	21,725,565
1873, .	26,670,905	9,770,012	38,440,917	15,660,356	429,325	5,868,774	21,956,455
1874, .	26,958,905	9,743,791	36,700,696	15,774,799	267,086	6,357,174	22,399 059
1875, .	27,790,367	10,055,607	37,845,974	18,073,181	282,336	6,404,717	22,760,234
1876, .	27,527,005	10,137,630	37,664,635	16,240,447	321,610	6,353,513	22,915,570
1877, .	27,322,655	10,748,060	37,800,715	16,295,113	365,580	6,702,678	23,363,371
1878, .	27,830,385	9,969,760	37,800,145	16,331,161	413,810	7,234,768	23,979,739
1879, .	27,770.565	10,747,569	38,518,134	16,326,187	562,124	7,025,536	24,513,847
1880, .	28,221,878	10,010,573	36,832,451	16,418,551	687,360	7,676,537	24,782,448
1881, .	28,452,885	11,020,524	39,473,409	16,569,925	660,550	7,797,147	25,057,622
1882, .	28,443,180	11,092,487	30,535,887	16,641,633	720,550	8,132,960	25,495,143
1883, .	28,618,513	11,162,842	39,781,355	16,796,584	723,050	8,162,211	25,681,845
1884, .	28,364,749	11,668,500	40,033,249	16,609,645	1,129,746	7,963,706	25,703,097
1885, .	28,890,379	11,285,022	40,175,401	16,578,988	1,205,070	8,065,358	25,849,422
1886, .	28,812,179	11,280,155	40,092,334	10,518,438	1,424,011	8,131,378	26,073,827
1887, .	28,873,079	11,054,211	39,927,290	16,654,704	1,497,089	8,275,700	26,427,493
1888, .	28,952,739	11,228,211	40,180,950	18,467,383	1,786,275	8,061,763	26,315,421
1889, .	29,145,642	11,440,309	40,585,951	16,512,342	2,107,471	8,025,006	26,644,819
1890, .	30,066,062	12,016,528	42,082,590	10,179,238	2,702,095	8,015,279	26,926,812
1891, .	30,682,297	12,503,197	43,185,494	16,227,866	2,833,568	8,217,838	27,279,272
1892, .	31,473 981	12,925,331	44,399,292	16,338,012	3,120.660	8,252,988	27,711,669
1893, .	30,673,961	13,065,532	43,739,403	16,221,331	3,018,025	8,166,398	27,405,754
1894, .	30,592,361	13,272,282	43,864,623	16,202,582	3,193,116	8,187,878	27,563,076
1895, .	30,158,861	13.058,012	43,216,873	16,208,416	3,198,861	8,181,167	27,588,444
1896, .	30,393,283	13,116,526	43,509,809	16,446,519	3,243,571	8,322,947	28,013,037
1897, .	30,579,111	13,085,109	43,604,220	16,446,234	3,208,991	8,332,876	27,988,101
1898, .	30,070,844	12,958,775	43,029,020	16,159,901	3,158,191	8,421,157	27,739,339
1899, .	30,765,215	12,990,409	43,755,624	16,608,621	3,157,821	8,483,310	28,249,752
1900, .	31,890,768	13,402,322	45,293,090	16,088,893	4,728,876	6,939,215	27,756,844

RAILWAYS.

Capital of the Railway Companies of Ireland, the Paid-up Debenture Stock or Funded Debt; the Loans Outstanding, and 1871 to 1900.

Capital raised by Loans and Debenture Stock.			Total Capital paid up and raised by Loans and Debenture Stock.	Subscriptions to other Companies.	Year.
Loans.	Debenture Stock.	Total raised by Loans and Debenture Stock.			
£	£	£	£	£	
4,039,345	2,306,140	5,345,485	27,028,580	479,345	1871.
3,742,842	3.227,586	6,970,428	28,895,993	492,679	1872.
3,227,921	3,990,518	7,218,439	29,174,894	477,322	1873.
3,028,986	4,414,313	7,443,304	29 842,363	490,855	1874.
2,793,221	4,692,720	7,485,941	30.245,175	494,505	1875.
2,597,545	5 152,294	7.749,839	30,665,409	355,102	1876.
2,181,097	5,710,892	7,891,989	31,255 360	308,796	1877.
1,973,903	6,014,814	7,988,717	31,968,456	350,350	1878.
2,123,638	6.515,745	8,639,383	33,153,230	357,060	1879.
2,064,890	0,893,720	8,958,810	33,741,058	393.460	1880.
2,071,771	7,142,231	9,214,002	34,271,624	435,660	1881.
2,089,952	7,377,570	9,467,522	34,962,665	439,120	1882.
2,080,878	7,681.440	9,762,318	35,444,183	463,957	1883.
1.847,067	8,203,837	10,050,904	35,754,001	402,701	1884.
1,396,406	8,051,751	0,748,167	35,597,589	402,701	1885.
1,506,943	8,298,305	9,905,248	35,979 075	421,596	1886.
1,442,042	8,587,754	10,029,796	36 457 289	439,595	1887.
1,269,836	8,954,016	10,223,852	36,539,273	427,595	1888.
1,203,979	9,188,593	10,392,572	37,037,391	427,595	1889.
1,121,539	9,250,371	10,371,910	37,298,522	301,740	1890.
1,106,450	9,390,882	10,497,332	37,776,604	294,446	1891.
1,107,971	9,682,620	10,790,591	38,502,260	285,696	1892.
991,459	10,361,362	11,352,821	38,758,575	285,696	1893.
925,228	10,666,527	11,591,755	39,154,831	284,011	1894.
821,725	10,857,432	11,679,157	39,267,601	275,028	1995.
723,564	10,979,271	11,702,835	39,715,872	274,130	1896.
527,364	10,950,992	11,478,356	39.466,457	287,630	1897.
379,394	11,231,619	11,811,013	39,350,352	503,630	1898.
380,378	11,461,895	11,842,271	40,092,023	658,630	1899.
374,893	11,634,196	12,009,089	39,765,573	682,971	1900.

TABLE XII.—Showing the TOTAL TRAFFIC in PASSENGERS and GOODS

YEAR.	TOTAL LENGTH OF LINES OPEN.	PASSENGER TRAFFIC.				
		NUMBER OF PASSENGERS CONVEYED (exclusive of Season and Periodical Tickets).				Holders of Season or Periodical Tickets.
		1st Class.	2nd Class.	3rd Class (including Parliamentary).	Total.	
	M.					
1871, . .	1,988	1,948,875	4,323,765	9,275,294	15,547,934	17,575
1872, . .	2,091	1,941,664	4,171,009	10,214,743	10,327,416	19,271
1873, . .	2,101	1,884,116	3.960,084	10,497,506	10,342,806	19,402
1874, . .	2,127	1,914,181	4,163,657	10,467,740	16,535,578	18,648
1875, . .	2,148	1,918,737	4,166,122	10,788,802	16,873,661	20,737
1876, . .	2,157	1,862,382	4,208,562	11,285,310	17,356,203	22,290
1877, . .	2,203	1,822,061	4,091,779	11,352,906	17,266,746	20,922
1878, . .	2.259	1,833.841	4,204,400	11,842,905	17,881.140	21,104
1879, . .	2,285	1,040,099	3,808,296	10,954,002	16,402,397	21,640
1880, . .	2,370	1,689,927	3,914,962	11,654,128	17,259,017	21,586
1881, . .	2,441	1,675.870	4,021,240	11,946,144	17,043,260	22,157
1882, . .	2,465	1,640.467	4,009,728	13,073,793	18,723,088	23,289
1883, . .	2,502	1,699,029	4,177,589	13,408,234	10,284,852	23,440
1884, . .	2,525	1,637,043	4,233,810	13,684,745	10,555,598	21,659
1885, . .	2,575	1,538,324	4,108,847	13,473,401	10,120,662	21,825
1886, . .	2,632	1,384,682	4,034,715	13,300,868	18,720,265	22,470
1887, . .	2,674	1,367,624	4,203,965	13,899,360	10,470,058	23,695
1888, . .	2,733	1,367,697	4,216,045	14,329,155	19,912,897	24,396
1889, . .	2,791	1,394,646	4,393,944	15,223,445	21,012,035	25,891
1890. . .	2,792	1,344,737	4,333,070	15,734,865	21,413,281	26,255
1891, . .	2,863	1,512,544	4,196,426	16,493.288	22,202,258	27,845
1892, . .	2,895	1,503,426	4.188,755	16,954,829	22,647,010	28,236
1893, . .	2,991	1,487,010	4,301,048	17,926,403	23,715,061	20,865
1894, . .	3,044	1,555,069	4,250,164	18,731,154	24,530,387	30,351
1895, . .	3,173	1,623,492	4,705,776	19,916,280	26,245,548	30,169
1896, . .	3,178	1,628,977	4,384,517	20,551,776	26,565,270	30,189
1897, . .	3,168	1,512,393	3,973 255	20,410,651	25,905,299	31,006
1898, . .	3,176	1,516,641	4,014,318	21,101,305	26,632,264	82,452
1899, . .	3,176	1,540,991	3,975,827	21,888,815	27,414,633	35,869
1900, . .	3,183	1,496,145	3,027,553	22,226,117	27,649,815	30,808

RAILWAYS.

and the RECEIPTS therefrom for each YEAR from 1871 to 1900.

GOODS TRAFFIC.		NUMBER OF MILES TRAVELLED BY TRAINS.			
Minerals.	General Merchandise.	Passenger Trains.	Goods and Mineral Trains.	Total.	YEAR.
Tons.	Tons.				
472,326	2,441,289	6,162,313	2,482,733	8,645,046	1871.
469,571 §496,078	2,076,236	5,701,062 ‡849,007	2,676,967	9,229,036	1872.
512,850 §345,081	2,299,252	5,942,944 ‡759,787	2,780,632	9,483,363	1873.
496,788 §352,957	2,269,367	5,444,127 ‡1,476,200	2,509,866	9,430,193	1874.
679,100	2,675,114	5,381,483 ‡1,652,318	2,534,532	9,568,333	1875.
612,041	2,908,145	6,024,707 ‡893,718	2,840,153	9,758,576	1876.
887,199 §36,682	2,748,856	6,229,973 ‡849,393	3,000,443	10,079,614	1877.
810,960	2,757,704	6,354,575 ‡933,335	3,114,683	10,402,593	1878.
1,047,273	2,589,084	6,458,676 ‡942,433	3,085,963	10,487,072	1879.
1,000,033	2,595,300	6,802,356 ‡867,658	3,314,109	10,984,123	1880.
1,050,722	2,521,936	7,300,706 ‡375,628	3,586,346	11,262,880	1881.
1,148,015	2,689,841	7,403,674 ‡600,360	3,524,555	11,526,589	1882.
1,196,488	2,817,569	7,526,671 ‡605,777	3,602,884	11,735,532	1883.
1,119,295	2,706,515	7,606,039 ‡431,492	3,822,255	11,859,786	1884.
1,022,808	2,704,708	8,012,700 ‡371,399	3,866,715	12,250,814	1885.
968,969	2,676,288	8,101,646 ‡719,740	3,582,385	12,403,771	1886.
1,012,359	2,759,527	6,129,324 ‡512,956	3,864,570	12,506,850	1887.
1,063,248	2,711,234	6,284,563 ‡708,247	3,932,755	12,925,565	1888.
1,179,383	2,984,960	6,405,861 ‡871,472	4,075,722	13,354,055	1889.
1,146,531	3,150,427	8,452,232 ‡856,185	4,272,103	13,580,520	1890.
1,186,677	3,224,054	8,632,166 ‡931,029	4,443,370	14,006,565	1891.
1,252,714 §69,327	2,999,416	8,799,598 ‡910,971	4,483,398	14,193,967	1892.
1,064,500 §37,719	3,092,245	9,058,070 ‡1,131,846	4,420,102	14,610,015	1893.
1,305,877 §41,411	9,289,727	9,304,843 ‡1,096,191	4,760,432	15,163,466	1894.
1,391,619	3,367,838	9,404,833 ‡1,582,009	4,737,197	15,724,039	1895.
1,396,669	3,316,038	9,763,540 ‡1,623,963	4,868,359	16,255,862	1896.
1,538,513	3,508,017	9,820,212 ‡1,660,044	4,932,259	16,412,515	1897.
1,559,306	3,554,113	10,069,044 ‡1,657,236	5,002,746	16,729,026	1898.
1,590,103	3,617,676	10,367,617 ‡1,630,033	5,119,124	17,116,774	1899.
1,513,476	3,637,834	10,484,907 ‡1,579,099	5,204,790	17,268,796	1900.

§ Goods not classified.

‡ Miles travelled by Mixed Trains.

[Continued on next page.

TABLE XII.(*continued*)—Showing the TOTAL TRAFFIC in PASSENGERS and

YEAR.	RECEIPTS (GROSS) FROM PASSENGER TRAFFIC.							
	RECEIPTS FROM PASSENGERS.					Excess Luggage, Parcels, Carriages, Horses, Dogs, &c.	Mails.	Total Receipts from Passenger Traffic.
	1st Class.	2nd Class.	3rd Class (including Parliamentary)	Holders of Season or Periodical Tickets.	Total from Passengers.			
	£	£	£	£	£	£	£	£
1871, . .	264,358	303,110	470,920	32,342	1,070,730	88,991	92,809	1,252,530
1872, . .	267,205	299,934	531,104	35,672	1,134,283	94,596	94,117	1,322,996
1873, . .	271,158	†486 306,215	587,821	30,919	1,202,113	103,214	99,774	1,405,101
1874, . .	273,777	312,026	584,251	38,629	1,208,583	102,426	103,834	1,414,843
1875, . .	275,563	309,291	592,053	41,729	1,218,736	103,620	106,891	1,429,247
1876, . .	268,192	307,739	611,825	44,030	1,231,788	104,452	107,047	1,443,885
1877, . .	265,462	296,783	615,799	40,180	1.224,204	109,534	109,010	1,442,748
1878, . .	258,693	300,234	839,513	47,263	1,245,703	109,305	109,719	1,464,727
1879, . .	231,942	285,482	577,787	46,491	1,141,712	108,435	110,111	1,360,258
1880, . .	232,133	†10 297,494	637,550	47,322	1,214,499	117,493	110,200	1,442,102
1881, . .	210,042	299,843	632,803	47,994	1,190,682	123,178	111,424	1,425,284
1882, . .	211,004	311,004	683,520	47,259	1,253,387	121,282	112,899	1,487,568
1883, . .	221,138	323,642	686,086	47,900	1,278,865	126,447	113,363	1,518,075
1884, . .	213,261	323,129	683,685	48,027	1,268,102	130,600	115,809	1,514,517
1885, . .	197,350	814,717	079,756	49,669	1,241,492	136,873	131,582	1,509,947
1886, . .	172,765	303,474	670,504	48,898	1,204,701	134,313	143,524	1,482,538
1887, . .	166,076	309,872	692,158	50,430	1,218,536	142,038	145,685	1,506,259
1888, . .	166,974	310,431	722,761	52,901	1,253,157	147,068	140,282	1,546,507
1889, . .	171,300	318,249	760,102	55,690	1,305,241	160,027	146,573	1,611,841
1890, . .	171,084	320,391	788,557	56,950	1,336,982	167,103	140,953	1,651,038
1891, . .	173,142	308,876	823,929	60,307	1,366,314	178,064	150,804	1,696,082
1892, . .	171,793	295,569	843,403	61,017	1,371,882	181,140	156,810	1,709,838
1893, . .	162,800	287,039	876,097	62,174	1,388,710	180,379	162,076	1,737,165
1894, . .	164,429	277,930	901,572	64,136	1,408,073	106,206	164,832	1,769,111
1895, . .	168,573	282,124	038,770	63,099	1,452,566	222,873	165,830	1,841,069
1896, . .	187,027	272,799	958,102	62,449	1,460,377	231,734	166,542	1,858,653
1897, . .	161,506	254,743	975,720	62,556	1,454,525	238,749	166,713	1,859,987
1898, . .	161,546	244,764	1,019,320	64,834	1,400,464	245,341	107,096	1,903,501
1899, . .	106,856	245,787	1,057,293	67,480	1,537,396	259,933	170,937	1,968,266
1900, . .	166,823	243,912	1,112,527	68,557	1,591,819	272,398	170,500	2,034,717

† Excess Fares not classified.

RAILWAYS.

GOODS and the RECEIPTS therefrom for each YEAR from 1871 to 1900.

RECEIPTS (GROSS) FROM GOODS TRAFFIC.				MISCELLANEOUS:— RENTS, TOLLS, NAVIGATION STEAM-BOATS, &C.	TOTAL RECEIPTS FROM ALL SOURCES OF TRAFFIC.	YEAR.
Merchandise.	Live Stock.	Minerals.	Total Receipts from Goods Traffic.			
£	£	£	£	£	£	
729,816	183,306	58,027	971,149	48,707	2,272,386	1871.
805,179	193,124	63,867	1,062,170	36,099	2,421,265	1872.
872,431	197,632	65,833	1,135.896	35,987	2,576,934	1873.
863,658	183,098	60,440	1,107,196	42,760	2,564,799	1874.
911,389	215,377	77,090	1,203,856	38,051	2,671,154	1875.
996,381	221,538	74,969	1,292,888	37,592	2,774,365	1876.
1.012,045	227,834	86,917	1,326,796	36,057	2,805,601	1877.
973,126	225,295	103,453	1,301,874	33.860	2,800,461	1878.
891,337	193,178	128,162	1,212,677	35,503	2.608 438	1879.
900,809	198,681	120,937	1,220,427	32,653	2,695,272	1880.
867,454	190,479	118,260	1,176,193	34,800	2,636,277	1881.
912,997	242,495	129,525	1,285,017	38,291	2,810,876	1882.
952,215	208,808	136,010	1,297,033	39,531	2,855,239	1883.
917,305	225,720	128,533	1,271,558	42,166	2,828,241	1884.
906,943	221,069	120,818	1,248,830	42,755	2,801,532	1885.
906,866	241,705	121,574	1,270,145	42,599	2,795,282	1886.
922,460	231,375	126,235	1,280,070	43,455	2,829,784	1887.
911,403	263,917	129,235	1,304,555	43,543	2,894,605	1888.
984,183	252,702	143,874	1,380,759	48,598	3,041,198	1889.
1,022,515	262,632	140,153	1,425,300	48,999	3,125,337	1890.
1,057,477	257,793	147,855	1,463,125	50,395	3,209,602	1891.
1,012,951	252,481	152,809	1,418,241	49,672	3,177,751	1892.
1,059.523	267,139	132,299	1,458,961	52,544	3,248,670	1893.
1,104,350	293,884	170,288	1,568,522	57,954	3,395,587	1894.
1,110,444	280,699	175,057	1,566,200	81,389	3,488,658	1895.
1,109,902	269,907	175,258	1,555,067	64,784	3,478,504	1896.
1,138,125	281,553	194,827	1,614,505	63,829	3,538,321	1897.
1,151,406	283,453	194,231	1,829,090	66,091	3,598,682	1898.
1,175,490	295,985	200,634	1,672,109	72,469	3,712,844	1899.
1,198,534	307,165	193,210	1,698,909	72,721	3,806,347	1900.

IRISH

TABLE XIII.—Showing the TOTAL EXPENDITURE, ROLLING

YEAR.	Miles Constructed.	WORKING					
		Maintenance and Renewal of Way, Works, &c.	Locomotion Power (including Stationary Engines).	Repairs and Renewals of Carriages and Waggons.	Traffic Expenses (Coaching and Merchandise).	General Charges.	Rates and Taxes.
	No.	£	£	£	£	£	£
1871, .	1,988	319,477	318,106	85,905	279,047	56,091	52,927
1872, .	2,091	348,749	366,260	80,489	298,990	59,910	60,766
1873, .	2,101	381,341	436,808	99,464	323,701	66,366	66,643
1874, .	2,127	412,150	413,335	102,430	329,153	64,702	70,211
1875, .	2,148	410,589	393,122	111,223	339,176	68,808	70,270
1876,	2,157	432,481	308,535	114,253	355,521	74,079	67,915
1877, .	2,203	440,647	360,572	112,401	368,682	71,871	72,101
1878, .	2,259	450,107	303,120	121,573	378,072	73,524	70,239
1879, .	2,285	423,557	338,433	123,093	372,589	74,700	74,306
1880, .	2,370	397,357	356,055	124,146	377,431	77,471	77,429
1881, .	2,441	390,575	378,451	121,316	382,620	77,332	77,972
1882, .	2,465	410,345	383,311	125,510	402,286	78,422	70,579
1883, .	2,502	423,976	391,073	130,693	411,675	80,595	81,312
1884, .	2,525	420,034	*864 396,194	129,888	413,926	81,922	85,034
1885, .	2,575	410,775	*868 397,624	129,141	412,310	78,770	83,526
1886, .	2,632	396,230	*867 375,474	128,473	406,303	76,690	70,994
1887, .	2,674	399,412	*860 368,434	128,427	408,045	77,991	80,141
1888, .	2,733	389,535	*830 376,316	143,822	461,125	88,506	83,504
1889, .	2,791	404,342	*851 416,504	137,413	413,689	80,201	83,630
1890, .	2,792	407,079	*235 466,595	140,040	452,202	02,609	79,227
1891, .	2,863	413,261	488,244	144,148	469,998	96,311	74,073
1892, .	2,895	401,287	477,800	137,664	482,886	100,440	80,323
1893, .	2,991	418,191	469,697	140,288	501,609	102,290	84,391
1894, .	3,044	411,790	501,645	146,489	524,850	108,865	87,015
1895, .	3,173	429,487	504,733	146,774	539,736	114,125	88,806
1896, .	3,178	440,335	509,455	147,782	552,631	116,915	88,430
1897, .	3,168	459,957	526,836	151,616	558,520	117,129	98,763
1898, .	3,170	477,318	565,609	152,016	572,505	123,206	106,047
1899, .	3,176	497,096	577,983	157,863	585,579	123,355	111,551
1900, .	3,183	498,914	685,003	159,743	602,881	126,793	123,622

* Not classified by "Waterford and Wexford Railway."

RAILWAYS.

STOCK, &c., for each YEAR from 1871 to 1900.

EXPENDITURE.							
Government Duty.	Compensation for Personal Injury, &c.	Compensation for Damage and Loss of Goods.	Legal and Parliamentary Expenses.	Steam Boat, Canal, and Harbour Expenses.	Miscellaneous Working Expenditure not included in the foregoing.	Total Working Expenditure.	YEAR.
£	£	£	£	£	£	£	
—	15,785	9,873	9,149	4,719	30,532	1,181,691	1871.
—	6,717	10,604	12,425	4,115	26,410	1,284,635	1872.
—	7,259	10,747	9,360	4,763	14,840	1,421,387	1873.
—	4,327	9,975	9,445	4,483	22,815	1,443,026	1874.
—	17,460	11,009	10,813	4,377	14,701	1,457,548	1875.
—	7,335	10,896	13,158	5,085	21,892	1,471,150	1876.
—	17,201	13,120	12.543	6,596	20,648	1,502,382	1877.
—	18,300	8,236	9,467	7,391	14,262	1,513,213	1878.
—	23,904	6,340	14,854	7,083	12,853	1,472,232	1879.
—	3,973	4,782	16 621	7,784	11,986	1,455,637	1880.
—	4,977	5,520	15,518	9,624	10,197	1,483,102	1881.
—	25,041	5,672	10,922	10,637	11,026	1,542,751	1882.
—	11,530	6,821	13,389	11,010	11,580	1,574,518	1883.
—	13,200	4,980	0,554	9,910	10,607	1,576,117	1884.
—	4,480	4,976	9,032	9,901	10,067	1,550,598	1885.
—	26,984	5,574	8,770	10,410	10,545	1,526,316	1886.
—	10,808	4,440	18,452	10,019	12,446	1,525,445	1887.
—	4,752	3,372	9,812	11,663	12,080	1,525,544	1888.
—	69,404	3,852	8,775	10,462	13,760	1,651,257	1889.
—	66,474	4,696	25,966	13,172	14,663	1,763,713	1890.
—	12,430	5,575	13,912	13,811	14,875	1,746,638	1891.
—	4,243	7,408	16,677	13,352	15,431	1,737,511	1892.
—	6,360	5,582	14,711	16,564	15,210	1,774,893	1893.
—	7,934	5,345	13,692	20,929	15,979	1,844.533	1894.
—	6,529	6,136	10,705	23,077	15,616	1,885,724	1895.
—	8,013	5,819	13,147	23,141	17,119	1,922,767	1896.
—	4,589	5,710	3,175	23,532	15,577	1,975,404	1897.
—	13,780	6,517	16,340	22,928	13,957	2,070,223	1898.
—	7,764 †3,397	7,233	16,433	19,544	13,680	2,121,508	1899.
—	12,849 †2,717	6,816	20,724	22 132	14,501	2,276,495	1900.

† Compensation to employees under the "Workman's Compensation Act, 1897."

[*Continued on next page*

TABLE XIII. (*continued*).—Showing the TOTAL EXPENDITURE, ROLLING STOCK, &c., for each YEAR from 1871 to 1900.

YEAR.	TOTAL RECEIPTS, as given in the TRAFFIC RETURN.	NETT RECEIPTS.	Proportion per cent. of Expenditure to Total Receipts.	ROLLING STOCK ON 31ST DECEMBER.					
				Locomotives.	CARRIAGES, WAGGONS, TRUCKS, &C.				
					Carriages used for the Conveyance of Passengers only.	Other Vehicles attached to Passenger Trains.	Waggons of all kinds used for the Conveyance of Live Stock, Minerals, or General Merchandise.	Any other Carriages or Waggons used on the Railway not included in the preceding columns.	Total Number of Vehicles of all descriptions for Conveyance of Passengers, Live Stock, Ballast, &c.
	£	£		No.	No.	No.	No.	No.	No.
1871,	2,272,386	1,090,795	52	482	1,091	513	8,316	93	10,013
1872,	2,421,265	1,130,630	53	498	1,121	513	8,516	317	10,467
1873,	2,576,934	1,155,547	55	519	1,141	565	9,234	103	11,043
1874,	2,564,799	1,121,773	56	526	1,170	509	9,449	202	11,480
1875,	2,671,154	1,213,606	55	537	1,205	005	9,699	305	11,814
1876,	2,774,365	1,303,215	53	558	1,223	584	10,389	337	12,533
1877,	2,805,601	1,303,219	54	568	1,269	611	11,240	461	13,587
1878,	2,800,461	1,287,248	54	573	1,329	629	11,631	489	14,078
1879,	2,608,438	1,136,206	56	585	1,358	627	12,183	448	14,810
1880,	2,695,272	1,239,635	54	594	1,375	659	12,442	447	14,923
1881,	2,636,277	1,153,175	56	606	1,387	658	12,529	455	15,029
1882,	2,810,876	1,268,125	55	610	1,442	702	12,777	317	15,238
1883.	2,855,239	1,280,721	55	032	1,439	622	13,195	207	15,553
1884,	2,828,241	1,252,124	56	632	1,449	813	13,230	453	15,075
1885	2,801,334	1,250,736	55	038	1,531	712	13,437	299	15,979
1886,	2 795,282	1,268.966	55	055	1,543	766	13,558	413	16,280
1887,	2,829,784	1,304,339	54	606	1,583	751	13,696	294	16,324
1888,	2,894,005	1,369,061	—	675	1,606	764	13,966	317	10,653
1889,	3,041,198	1,389,941	54	686	1,548	800	14,264	380	17,082
1890,	3,125,337	1,361,624	66	002	1,558	915	14,663	421	17,557
1891,	3,209,602	1,402,964	54	705	1,625	941	15,439	447	18,452
1892,	3,177,751	1,440,240	55	719	1,078	985	15,747	437	18,847
1893,	3,248,670	1,473,777	55	734	1,719	1,031	15,955	456	19,181
1894,	3,395,587	1,551,054	54	748	1,756	1,038	16,350	465	19,609
1895,	3,488,058	1,602,934	54	771	1,778	1,072	16,868	447	20,165
1896,	3,478,504	1,555,717	55	780	1,845	1,096	17,280	490	20,711
1897,	3,538,321	1,502,917	56	787	1,858	1,090	17,562	408	20,984
1898,	3,598,682	1,528,459	58	800	1,861	1,099	17,945	496	21,401
1899,	3,712,844	1,591,336	57	809	1,873	1,121	18,281	496	21,771
1900,	3,806,347	1,529,852	60	810	1.886	1,128	18,120	826	21,960

III.—Canals.*

(a.) *Preliminary Observations.*

With a view to making these half-yearly Reports—which already deal with railway and shipping statistics—more complete as a statistical record of the means of transport and communication available in Ireland, I have, in the present one, endeavoured to bring together some facts and figures bearing on the economic functions of canals and inland waterways in general; the history of inland navigation in this country, and the present position of our Irish canals and river navigation. In his presidential address to the members of the Fourth International Congress on Inland Navigation, which met in 1890 in Manchester, Sir Michael Hicks-Beach was obliged to admit that the United Kingdom was very much behind other countries in its supply of statistical information on inland waterways and their traffic. However, the Board of Trade, in pursuance of powers conferred on them by the Railway and Canal Act of 1888, have, since the passing of that Act, issued two Blue Books [C. 6083—1890 : Cd. 19—1899] containing fairly complete and accurate† statistics of canals and inland navigations in the United Kingdom. The first of these publications (issued in 1890) is now out of print, and possibly neither of them had a wide circulation in Ireland. I have, therefore, abstracted from them the tables relating to Irish canals.‡ These, so far as they go, are distinctly interesting and

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* I am indebted to Mr. F. de Vismes Kane, of Drumreaske House, Co. Monaghan, late Chairman of the Grand Canal Company, for many valuable suggestions in the preparation of this statement, and for the loan of some interesting documents and MSS. on the history of Irish canals, on which subject his knowledge is exceedingly full.

† See, however, for a criticism of the Report of 1890, a paper on "Canals" by Lionel B. Wells, M. Inst. C.E., Report of Conf. on Inland Navigation, Birmingham, 1895, p. 28.

‡ See page 132 *et seq.*

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instructive, and enable some estimate to be made of the extent, nature, and revenue-earning powers of our systems of inland navigation.

It becomes more and more evident that it is an important preliminary to all lasting economic reform to have an instructed public opinion in this country concerning itself with our industrial interests. The amount of accurate information on public problems of importance to the material progress of the country is, from whatever cause, disappointingly small, even amongst those who ought to be interested in such matters. In looking up the materials on which the appended remarks are largely based, I experienced considerable difficulty, not merely in getting information, but even in getting at some of the sources of information. I take this as evidence that it is a work of some value to bring together in a succinct and connected form facts which, while accessible to any painstaking inquirer, are so scattered and hidden away in half-forgotten reports as to be beyond the easy reach of the general public. The time is not inopportune, moreover, for calling public attention to the *status quo* and the possibilities of our fine network of canals and river systems. There is (as I shall show presently) a revival of interest in every progressive country in the too long neglected question of inland waterways. Ireland—no country more so—is vitally concerned in the problem of cheap transport generally, and particularly in the cheap transport of such heavy goods of relatively small value as coal, stone, slates, brick, timber, lime, turf, manure, roots, &c., which are the characteristic items of water carriage. Again, a system of cheap and efficient water communication throughout the country would be of immense help to small industrial centres and to nascent rural industries such as, it may be hoped, will result in time from the new operations of State aid as applied to agriculture and industry. It must not be forgotten, in this connection, that, apart from new industries, there is in Ireland, as in many other countries, a large amount of potential traffic waiting on low transit rates. Sir Arthur Cotton rightly told the Commission on Canals of 1883 that "it was not traffic that made communications, but communications that made traffic"; and an American economist has justly said that "the carriers of freight hold the keys of trade." Proximity to market (to put the same truth in another way) is the economic justification of intensive culture, and every extension or (what amounts to the same thing) every cheapening of good means of communication brings more producers and consumers into profitable trade relations, and this permits of the application of more capital, labour, and skill to the improvement of agricultural and industrial methods. In these days of wideawake competition in a world-market, a slight reduction in freight-charges may make all the difference between success and failure in any industry. It seems important, then, that our transport problems should be studied with a knowledge of the facts of the case at home and abroad, and with due regard to the growing needs and the new possibilities of an industrial revival. Our canal system—if the term "system" can be applied to an unfinished network of waterways of diverse depths and numerous breaks of gauge—is, it is quite true, far from perfect; but it is equally far from being in the moribund condition which many people seem to imagine. One cannot, of course, read the history of its creation without forming one's own opinion as to the causes of its comparative inefficiency, and also as to some of the obvious remedies; but it is not my business or intention to touch on these points further than as they arise out of the consideration of the general question of transit on inland waterways.

(*b*.) *The Economic Functions of Canals and Inland Waterways.*

New Importance and Modern Conditions of Transit Facilities.

Rivers, lakes, and inland seas are the first natural highways of commerce and intercourse between peoples, and, as everyone knows, they play a most important *rôle* in the earlier stages of civilisation. Roads and canals followed as the first artificial highways, and, finally, with the application of steam power came the railroad and the steamship.* The evolution of trade had a somewhat parallel development. Originally the producer—or rather the producing unit, the family—is self-supporting and self-sufficient, consuming in great measure what it itself produces, there being little trade between individuals or groups; a further stage is reached when, with the division of trades or pursuits, exchange of wealth takes place between individuals living in the same locality; and, finally, comes the period of great specialisation of industry, involving the transportation of commodities from one district, country, and even continent, to another. It is in this latest stage of industrial growth or economic evolution that the question of transportation assumes an importance of the first order. Regularity, suitability, and safety of service, speed and cheapness of transport—these are, to-day, determining factors in the industrial struggle between the progressive nations who compete in the great markets of the world. How recent such facilities of communication are few people fully realise—they are, in effect, the creation of the second half of the nineteenth century. Porter, in his *Progress of the Nation*, written in 1842, makes the following observations on a Sussex hamlet which is now practically included as a suburban district of London: "An inhabitant of Hasham, in Sussex, lately living, remembered when a boy to have heard from a person whose father carried on the business of a butcher in that town, that in his time the only means of reaching the metropolis was either by going on foot or riding on horseback, the latter of which undertakings was not practicable at all periods of the year, nor in every state of the weather; that the roads were not, at any time, in such a condition as to admit of sheep or cattle being driven upon them to the London markets, and that for this reason the farmers were prevented sending thither the produce of their land, the immediate neighbourhood being, in fact, their only market. Under these circumstances a quarter of a fat ox commonly sold for about 15*s.*, and the price of mutton throughout the year was only five farthings the pound." To-day London is partially fed from Canada, Victoria, the Argentine, and even Siberia. As to cheapness of transport, a well-known illustration of an American economist may be quoted :—" The wages for one day's work of an average mechanic in the far East (*i.e.* of the United States) will pay for moving a year's subsistence of bread and meat a thousand miles or more from the distant West." These are but vivid illustrations of an economic revolution with the effects of which we are all familiar, and which has been brought home keenly to all Irish agriculturists. I bring them forward now to emphasise the importance of using every available means to improve facilities of communication, and to concentrate attention on a phase of the transport problem which, though it has at no time been ignored, and has recently been a good deal discussed,* deserves, I think, a fuller study, on the part of the general public, than it has yet received. One of Ireland's outstanding economic advantages is her nearness to several of the greatest food-consuming centres in the world; but this advantage is being daily lessened by the improvements in efficient transport service of our competitors, and by scientific progress in re-regard to cold storage, sterilising chambers, and the use of preservatives for food products. It behoves us then to see that nothing is left undone to secure the effective working of our railways, rivers, canals, and even our roads, and to make them directly subserve the industrial needs of the country. There is, indeed, a wide field of work for the improvement of Irish agricultural and other products; there is very much still to be learnt in the matter of preparing these products for market so as to suit the requirements of the consumer; but at least of equal moment it is to bring our means of communication in regard to speed, freight-charges, and general efficiency up to the level of those European countries which at present challenge our supremacy in the British markets.

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* On the 24th March, 1824, it is interesting to note, the first steamer service was established between Dublin and Liverpool, the "City of Dublin" doing the journey in fourteen hours. A week was the average of sailing vessels for the same journey.

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* Notably, by Mr. James M'Cann, M.P., the present Chairman of the Grand Canal Company, in his "Address to the Shareholders of the Grand Canal Company, 1900"; Speech in House of Commons (April 30th, 1900) on "Irish Railways and Canals," and in a brochure entitled "Trade and Transit."

Revival of Interest in Inland Waterways

Within the past ten or fifteen years there has been a distinct and most significant revival of interest in every European country, as well as in the United States, in the question of canals and inland waterways generally. It has come to be realised that a vital mistake was made, especially in these countries, at the time of the advent of the railway, in not maintaining the canal systems as independent competitive routes, which, as it now appears, can carry more economically certain classes of traffic than the railways can. The *laisser faire* policy dominant in England at the time was against any direct State interference with canals and railways, and thus no less than one-third of the total canal mileage of the United Kingdom was allowed to pass, without protest or conditions, into the hands of the railway companies. This involved an even more serious interference with the competition of the waterways than appears at first sight, for it is clear that the railways had to get control of only a section of a navigation made up of one or more waterways, to interfere with competition along its entire length. Moreover, it was in regard to heavy traffic only that the railways needed to compete in the matter of freight charges with the canals. Passenger traffic, perishable traffic, and "smalls" traffic came to them as a matter of course. "That the whole subject of transit in England requires to be considered from its very foundation," wrote Sir Arthur Cotton in a very interesting Report to the Committee on "Canals" in 1883, "has been most fully proved by the late and present Committees already. The defects in the legislation hitherto on this subject are inconceivable. The one fact that all the main lines of water transit should have been paralysed by allowing the railways to buy up a short line in the middle, and so establish a monopoly, shows this beyond dispute. And this after they had been granted Acts of Parliament which gave them the power of doing anything they pleased with private property that lay in their way. It is remarkable that in France they should be so far in advance of us in this matter that the Government have taken the waterlines into their own hands, and are now opening them with one object in view, the general good of the community." The French Government had, in fact, with wise prevision, bought up a good many of the canals on the occasion of the slump in their value at the advent of railways.

Canal Legislation in the United Kingdom since 1845.

In 1845 the canal companies of the United Kingdom petitioned Parliament for protection against the competition of the railroads, and secured, for the first time, strange as it may seem, the right of becoming shippers over their own canals, obtaining at the same time the power to lower and raise their tariffs. Looking back now, with a knowledge of the actual development of railways, it seems incredible that railroads were originally regarded by their promoters as well as by the public as public highways, or even "land canals," and that the companies themselves declared it was against their wish, and would be against their interest, to attempt the carriage of goods and passengers, and that they desired to be toll-takers only. The same curious lack of apprehension of the inherent possibilities of the railway system was shown in the construction of short local lines in imitation of the existing sectional waterways. Thus the present Great Northern Railway of Ireland is, as is well known, the result of the amalgamation of no less than eleven smaller companies.

It must not be assumed, however, that the old system of waterways in the United Kingdom or elsewhere was ideal in any respect. Being a practical monopoly, fares and freight charges were, in many cases, excessive to a degree. Speaking in the House of Commons, May, 1836, Mr. Morrison is reported to have said :—" The history of existing canals, waterways, &c., affords abundant evidence of the evils (*i.e.* of monopoly) to which I have been adverting. An original share in the Loughborough Canal, for example, which cost £142 17*s*., is now selling at £1,250, and yields a dividend of £90 or £100 a year. The fourth part of a Trent and Mersey Canal share, or £50 of the company's stock, is now fetching £600, and yields a dividend of about £30 a year. And there are various other canals in nearly the same situation." While, however, it is quite true that the canal proprietors in pre-railway days reaped the harvest of monopoly rates, that supplies no reason whatever why they should have been sacrificed in the interests of another monopoly. It was, on the contrary, a strong reason for safeguarding the legitimate powers and functions of each means of communication, and thus permitting the development of a sound and healthy competition, which would have proved of enormous service to the trading community and (as it is now being recognised, especially on the Continent) have been in the true interests of the railways themselves. Parliament has, since 1845, made many efforts to secure an equitable readjustment of the respective interests of canal and railway owners. Several Royal Commissions and Select Committees have investigated the subject, and in the years 1854, 1873, 1888, and 1894, respectively, important Acts of Parliament to regulate railway and canal traffic have passed the Legislature. The Act of 1873 established a Railway Commission, consisting of three members and two assistants, in whose hands was placed the enforcement of the previous Act of 1854. This Act of 1873 was to have had effect for five years only, but in 1878 it was continued till the end of 1879, then till December 31st, 1882, then for five years longer. In 1887 the Commissioners were made a permanent body. The Act of 1873 enacted, *inter alia*, that:—

"Every railway company and canal company shall keep at each of their stations and wharves a book or books showing every rate for the time being charged for the carriage of traffic other than passengers and their luggage, from that station or wharf to any place to which they book, including any rates charged under any special contract, and stating the distance from that station or wharf of every station, wharf, siding, or place to which any such rate is charged.

"Every such book shall, during all reasonable hours, be open to the inspection of any person without the payment of any fee.

"The Commissioners may from time to time, on the application of any person interested, make orders with respect to any particular description of traffic, requiring a railway company or canal company to distinguish in such book how much of each rate is for the conveyance of the traffic on the railway or canal, including therein tolls for the use of the railway or canal, for the use of carriages or vessels, or for locomotive power, and how much is for other expenses, specifying the nature and detail of such other expenses.

"Any company failing to comply with the provisions of this section shall for each offence, and in the case of a continuing offence, for every day during which the offence continues, be liable to a penalty not exceeding five pounds, and such penalty shall be recovered and applied in the same manner as penalties imposed by the Railways Clauses Consolidation Act, 1845, and the Railways Clauses Consolidation (Scotland) Act, 1845 (as the case may require), are for the time being recoverable and applicable." (Section 14).

The Commissioners had power to decide whether terminal charges were reasonable, and their consent was necessary before any railway company could, except by Act of Parliament, purchase or obtain control of a canal (sect. 16).

The Railway and Canal Traffic Act of 1888.

The Act of 1888 was a further important step in the direction of freeing the canals from danger of domination by the railways and maintaining them as genuine competitors. It created a Railway and Canal Commission to supersede the Commission established by the Act of 1873. The constitution of this permanent Commission is laid down in sections 2, 3, and 4 of the Act of 1888, which read as follows :—

2. On the expiration of the provisions of the Regulation of Railways Act, 1873, with respect to the Commissioners therein mentioned, there shall be established a new Commission, styled the Railway and Canal Commission (in this Act referred to as the Commissioners), and consisting of two appointed and three ex-officio Commissioners; and such Commission shall be a court of record, and have an official seal, which shall be judicially noticed. The Commissioners may act notwithstanding any vacancy in their body.

3.—(1.)—The two appointed Commissioners may be appointed by Her Majesty at any time after the passing of this Act, and from time to time as vacancies occur.

(2.) They shall be appointed on the recommendation of the President of the Board of Trade, and one of them shall be of experience in railway business.

(3.) Section five of the Regulation of Railways Act, 1873, shall apply to each appointed Commissioner.

(4.) There shall be paid to each appointed Commissioner such salary not exceeding three thousand pounds a year as the President of the Board of Trade may, with the concurrence of the Treasury, determine.

(5.) It shall be lawful for the Lord Chancellor, if he think fit, to remove for inability or misbehaviour any appointed Commissioner.

4.—(1.) Of the three ex-officio Commissioners of the Railway and Canal Commission, one shall be nominated for England, one for Scotland, and one for Ireland; and an ex-officio Commissioner shall not be required to attend out of the part of the United Kingdom for which he is nominated.

(2.) The ex-officio Commissioner in each case shall be such judge of a superior court as—

(*a.*) in England the Lord Chancellor; and
(*b.*) in Scotland the Lord President of the Court of Session; and
(*c.*) in Ireland the Lord Chancellor of Ireland;

may from time to time by writing under his hand assign, and such assignment shall be made for a period of not less than five years.

(3.) For the purpose of the attendance of the ex-officio Commissioners, regulations shall be made from time to time by the Lord Chancellor, the Lord President of the Court of Session, and the Lord Chancellor of Ireland respectively, in communication with the ex-officio Commissioners for England, Scotland, or Ireland, as the case may be, as to the arrangements for securing their attendance, as to the times and place of sitting in each case, and otherwise for the convenient and speedy hearing thereof.

Other sections of interest in this important Act are section 31, which provides that on the application of anyone interested in through traffic the Commissioners can order through rates and decide whether any through rate is just and reasonable; section 39 (3), which provides :—

"When the canal of a canal company, or any part thereof, is intended to be stopped for more than two days, the company shall report to the Board of Trade, stating the time during which such stoppage is intended to last, and when the same is reopened the company shall so report to the Board of Trade." (*Section* 39 (3).)

And section 42, which runs as follows :—

"No railway company, or director or officer of a railway company, shall, without express statutory authority, apply or use or authorise or permit the application or use of any part of the company's funds for the purpose of acquiring, either in the name of the railway company, or of any director or officer of the railway company, or other person, any canal interest, or of enabling any director or officer of the railway company, or other person, to purchase or acquire any canal interest, or of guaranteeing or repaying to any director or officer of the railway company or other person who has purchased or acquired any canal interest the sum of money expended or liability incurred by such director, officer, or person in the purchase or acquisition of such canal interest, or any part of such money or liability.

"In the event of any contravention of the provisions of this section, the canal interest purchased in such contravention shall be forfeited to the Crown, and the directors or officers of the company who so applied or used, or authorised or permitted such application or use of the company's funds, shall be liable to repay to the company the sums so applied or used and the value of the canal interest so forfeited; and proceedings to compel such repayment may be taken by any shareholder in the company.

"In this section the expression 'company's funds' means the corporate funds of any railway company, and includes any funds which are under the control of or administered by a railway company; the expression 'officer' includes any person having any control over a company's funds or any part thereof; and the expression 'canal interest' means shares in the capital of a canal company, and includes any interest of any kind in a canal company or canal." (*Section* 42.)

The Amending Act of 1894.

On August 25th, 1894, "An Act to Amend the Railway and Canal Traffic Act of 1888" became law. This brief but important Amending Act may be quoted here *in extenso*. It runs as follows:—

An Act to amend the Railway and Canal Traffic Act, 1888.

[25th August, 1894.]

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of same, as follows:

1.—(1.) Where a railway company have, either alone or jointly with any other railway company or companies, since the last day of December, one thousand eight hundred and ninety-two, directly or indirectly increased, or hereafter increase directly or indirectly, any rate or charge, then if any complaint is made that the rate or charge is unreasonable, it shall lie on the company to prove that the increase of the rate or charge is reasonable, and for that purpose it shall not be sufficient to show that the rate or charge is within any limit fixed by an Act of Parliament or by any Provisional Order confirmed by Act of Parliament.

(2.) Under and subject to any regulations which may be made by the Board of Trade, every railway company shall keep the books, schedules, or other papers, specifying all the rates, charges, and conditions of transport in use upon such railway on the thirty-first day of

December, one thousand eight hundred and ninety-two, open for inspection at its head office, and shall upon demand supply copies of or extracts from such books, schedules, and papers.

(3.) The Railway and Canal Commissioners shall have jurisdiction to hear and determine any complaint with respect to any such increase of rate or charge, but not until a complaint with respect thereto has been made to and considered by the Board of Trade under section thirty-one of the Railway and Canal Traffic Act, 1888.

(4.) Unless the court shall before or at the hearing of the complaint otherwise order, a complainant to the Railway and Canal Commissioners under this section shall, before or within fourteen days after filing his complaint, pay to the railway company such sum in respect of any rate or charge complained of as would have been payable by him to them had the rate or charge in force immediately before the increase remained in force; or if that rate or charge is higher than the rate or charge in force on the last day of December, one thousand eight hundred and ninety-two, then such sum as would have been payable on the footing of the last-mentioned rate or charge; any dispute as to the amount so payable shall be decided by the registrar, or in such other mode as the court may order, but such payment or decision shall be without prejudice to any order of the court upon the complaint.

(5.) Section twelve of the Railway and Canal Traffic Act, 1888, shall apply in the case of any such complaint, and in the case of any rate or charge increased before the passing of this Act shall have effect as if six months after the passing of this Act were substituted for the limit of one year therein mentioned, but the Board of Trade may, if they think fit, extend the said period of six months with respect to any complaints made to them during that period.

2. In proceedings before the Railway and Canal Commissioners, other than disputes between two or more companies, the Commissioners shall not have power to award costs on either side, unless they are of opinion that either the claim or the defence has been frivolous and vexatious.

3. The provisions of section fourteen of the Regulation of Railways Act, 1873, with respect to the power to make orders and failure to comply with such orders, shall extend to any rates entered in books kept in pursuance of section thirty-four of the Railway and Canal Traffic Act, 1888.

4. Whenever merchandise is received or delivered by a railway company at any siding or branch railway not belonging to the company and a dispute arises between the railway company and the consignor or consignee of such merchandise as to any allowance or rebate to be made from the rates charged to such consignor or consignee in respect that the railway company does not provide station accommodation or perform terminal services, the Railway and Canal Commissioners shall have jurisdiction to hear and determine such dispute, and to determine what, if any, is a reasonable and just allowance or rebate.

5. This Act may be cited as the Railway and Canal Traffic Act, 1894, and shall be read with the Railway and Canal Traffic Acts, 1873 to 1888.

In May, 1892, the Board of Trade had begun the investigation of the powers of Navigation Companies and their rate charges, and in 1893 had revised the Schedule. Previously Parliament had revised the Schedule of Maxima which the railways might charge for the conveyance of merchandize traffic. Hence the above Act dealt with complaints as to rates or charges raised since 1892.

Railway versus Canal.

All this legislation, however, excellent in intention as it was, came rather late to secure the full free development of inland waterways. Of the whole mileage of the canals of the United Kingdom, practically one-third, as has been said, belonged to railway companies in 1888. The actual figures were 1,204 m. 64½ ch. owned by railway companies, as against 2,608 m. 65 ch. not so owned. The mileage of canals belonging to railway companies has decreased since 1888 by a little over 65 miles, owing to the transfer to the Sheffield and South Yorkshire Navigation Company of certain canals which belonged to the Grand Central Railway Company. Of the 582 m. 12 ch.* of canals in Ireland, 95 m. 69 ch., or nearly one-sixth, is in the hands of a railway company. Commenting at the Manchester Conference on the 1888 figures of the Board of Trade, Sir Michael Hicks-Beach, the then President of the Board of Trade, said:—"Out of the whole mileage of the canals of the United Kingdom, one-third belong to the railway companies. That one-third only carries one-fourth of the total traffic carried on the canals. The gross receipts per mile on that one-third are considerably less than they are on the independent canals, and the net profits out of these gross receipts amount to as little as one-fourth of the gross receipts. I confess, without desiring to say anything that should be unpleasant to the railway companies, that the facts do seem to me to give some colour to the accusation which has been frequently made, that when a railway company becomes the owner of a canal it works that canal rather for the profit of the railway than for the profit of the canal or the advantage of the community. I believe there can be no more short-sighted policy than such a policy as that. If our railway companies allowed the free development of the traffic of their canals and through traffic from their canals to the canals of independent companies, I believe the result would be most satisfactory to canals generally and to the public at large, but even, by the increase of trade, to the railways themselves." This is emphatically the opinion of those foreign Governments which own both the railways and canals, and which can thus secure a natural and profitable division of labour between the two supplementary modes of transit. I shall return, in a moment, to the illustration of this point. Meantime I take it as an evidence of what I may call the vitality of inland waterways — a vitality arising, of course, from their inherent utility and adaptability as economical means of communication—that in spite of the past action and attitude of railway companies (of which something has just been said), and in spite of their own intrinsic engineering and other defects, the canals of the United Kingdom have been able to survive at all and even to pay a moderate return on capital.

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* This figure is taken from the Board of Works return for 1898, but the Table (see page 142 *et seq.*) on which this mileage is estimated omits the following waterways;—River Suir Navigation, Foyle Navigation (Foyle to Strabane), Ballinamore and Ballyconnell Navigation, Lough Corrib Navigation, and the Tyrone Navigation. An estimate of our inland navigation places it at 750 miles, more than two-thirds of which are natural lakes and rivers.

According to the Board of Trade Return issued in 1890 (the particulars given are for the year 1888), it will be seen that 25 per cent. of the paid-up ordinary capital paid 2 to 3 per cent. dividend; 47 per cent. paid 3 to 4 per cent.; and 9 per cent. paid 4 to 10½ per cent. Only 6 per cent. of the whole ordinary paid-up capital gave no return. The Board of Trade figures for the year 1898, which I append, are, it is true, far from being so favourable. Still, it will be seen that 68·48 per cent. of the entire ordinary capital pays some dividend, while as much as 41·47 per cent. still pays more than 3 per cent. interest:—

Table showing for the Year 1898 the Amount of Ordinary Stock, classed according to the Rate per Cent. of Dividend Paid, in respect of Canals and Navigation, in England and Wales, Ireland and the United Kingdom, not belonging to Railway Companies.

Rate per Cent. of Dividend or Interest Paid.	ORDINARY.			
	England and Wales.	Ireland.	United Kingdom.	Per Cent. of Total.
	£	£	£	
No dividend or interest paid,	4,861,738½	82,898	4,944,636½	31·52
Dividends and interest paid :—				
Not exceeding 1 per cent.,	1,086,093	66,000	1,152,093	7·34
Exceeding 1 per cent. and not exceeding 2 per cent.	259,150	—	259,150	1·65
Exceeding 2 per cent. and not exceeding 3 per cent.	2,763,100	—	2,763,100	17·61
Exceeding 3 per cent. and not exceeding 4 per cent.	5,682,575	332,950	6,015,525	38·34
Exceeding 4 per cent. and not exceeding 5 per cent.	231,032	5,120	236,152	1·51
At 5¼ per cent, . .	178,648	—	178,648	1·14
At 6 per cent., . .	—	—	—	—
At 7½ per cent., . .	24,400	—	24,400	·16
At 9 per cent., . .	50,000	—	50,000	·32
Birmingham and Warwick Junction Canal.	60,000	—	60,000	·38
Premiums, . . .	5,183	—	5,183	·03
Total, ...	15,201,919½	486,968	15,688,887½	100·0

The following comparison between the dividend-paying power on the ordinary paid up capital of the canals of the United Kingdom, the canals of Ireland, and the Irish railways, will make it clear that the canal, even under the most crippling conditions, is not yet in these countries a negligible quantity in the matter of merchandise and mineral transport:—

Statement showing for the Year 1898* the Proportion per Cent. of the Ordinary Capital of the Canals of the United Kingdom, the Irish Canals, and the Irish Railways, respectively, upon which (I.) No Dividend was paid, and (II.) Dividends were paid, classified according to the Rates of Interest.

—	Amount of Ordinary Capital.	Proportion per Cent. of Ordinary Capital upon which—						
		(I.)—No Dividend was paid.	(II.)—Dividends were paid.					
			Not exceeding 1 per cent.	Exceeding 1 and not exceeding 2 per cent.	Exceeding 2 and not exceeding 3 per cent.	Exceeding 3 and not exceeding 4 per cent.	Exceeding 4 and not exceeding 5 per cent.	Exceeding 5 per cent.
	£							
Canals of the United Kingdom.	15,688,887	31·5	7·4	1·7	17·6	38·3	1·5	2·0
Irish Canals,	486,968	17·0	13·5	—	—	68·4	1·1	—
Irish Railways, .	16,159,991	18·2	0·3	2·0	0·7	15·0	31·4	32·4

The traffic of the canals of Ireland amounted to 708,174 tons in 1898, while the goods traffic of the Irish railways was 5,113,419 tons in the same year.

In an admirable memorandum on "The Policy of Water Carriage in England," which Lieutenant-General Rundall, R.E., handed in to the Commission on Canals (1883), the distinctive advantages of water transport are excellently set out as follows:—

"It is not only in the item of cheapness, however, that canal carriage is superior, but it also possesses the following advantages:—

I. It admits of any class of goods being carried in the manner and at the speed which proves to be most economical and suitable for it, without the slightest interference with any other class.

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* The latest year for which full Canal returns are available.

2. The landing or shipment of cargo is not necessarily confined to certain fixed stations as is obligatory on railways, but boats can stop anywhere on their journey to load and unload.

3. The boat itself often serves as a warehouse, in which an owner may keep his cargo till sold.

4. The dead weight to be moved in proportion to the load is much less in the case of canal carriage than that of railway. The ordinary railway truck weighs nearly as much as the load put on it, whereas a cargo boat will carry four or five times its own weight.

5. The capacity for traffic is practically unlimited, even in the case of canals with locks, provided the locks are properly designed. A lock 150 feet long by 20 feet broad, in a canal with a draft of six feet, will pass single boats of 300 tons burden. Locks can be designed, and are in actual operation, so as to be manœuvrable in three minutes; but supposing that time were doubled, then at the rate of 10 lockfuls of 300 tons per hour, the capability of a single lock would be at the rate of 10 × 300 × 24 = 72,000 tons per day, or over 25 million tons per annum. If a larger traffic required to be accommodated, it would be met either by increasing the speed at which the locks were worked, or doubling their number.

6. In the case of either State or private canals, unless worked by the owners of the canal, there is no necessity for maintaining an enormous and expensive apparatus or establishment, as all that can and would be carried on by separate agencies and by district capital, thus avoiding a large expenditure in the first cost, and subsequent maintenance of rolling stock.

7. The almost total absence of risk and the reduction of damage to cargo in transit to a minimum. In order to reap the fullest advantages of water carriage, however, it will be necessary, just as it is in all undertakings, not only to construct the most perfect instrument possible, but also to take care that it is most carefully and wisely managed afterwards."

It must be borne in mind, too, that, from the national point of view, the good influence of our system of canals and waterways has been, and is, greater than the volume of trade dealt with or the dividend returns earned might lead us to imagine. Their power of regulating freight charges on the railways is considerably more than their absolute efficiency at any moment would seem to imply; for even potential competition has an immediate influence on rates, as anyone conversant with railway problems can readily illustrate from his own experience. In any comparison between railways and canals it should never be forgotten that the former are regarded (as we actually find them) at the highest point of modern efficiency, while canals have to be considered (as we actually find them also) as means of transport using, in these countries at any rate, out-of-date sections, locks, barges, and haulage, and thus affording a most imperfect estimate of what their potentialities would be under improved modern conditions. The railway has developed wonderfully in response to the increasing demands of trade and passenger traffic, while inland waterways have, in the United Kingdom for the most part, remained stationary for quite half-a-century, and many of them have actually retrogressed or even gone derelict. In regard to this whole question of competition between waterways and railways, the following extract from Professor Emory R. Johnson's "Inland Waterways" (Philadelphia, 1893) is well worthy of respect as coming from a distinguished economist who has made a special study of transit problems :—"*The best regulator of railroad rates is* (writes Dr. Johnson), *the independent waterway.** Competition between railroads and water-routes is quite different in kind from that of railroads with each other; it is bound to produce cheaper rates, and can do this without detriment to the railroads. There is abundant evidence showing the power of water transportation to lower freight rates. The past and present opposition which the railroads have shown the waterways in order that rates might be controlled indicates clearly enough that the railroads are conscious of the potency of water competition. The railroads see in the waterway an agency which can move certain kinds of freight at lower rates than they can be transported on land, and, without analysing the results of this to see what may

The Canal as a Regulator of Railway Rates.

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* The italics are in the original.

be the secondary effects on the freight business by rail of the cheaper transportation charges for these certain kinds of goods, the railroad strives to quash the waterway out of existence. An illustration out of many that might be cited to show the real and effective competition of waterways is afforded by Belgium. Liege and Antwerp are connected by a line of navigation 156 kilometres long, that comes in competition with two railroads somewhat shorter in length. The water rates often come as low as 2 francs 15 centimes to 2 francs 30 centimes per ton for the entire distance. In order to compete, the railroads carry at their lowest rate between Liege and Antwerp. In train load lots of 200 tons, for exportation by sea, they charge only two francs a ton. This is a special rate, all others being enough higher than by boat to enable the waterways to secure a good volume of freight. The cheapest freight rates by rail to be found in the world are those for grain between Chicago and New York; and why? Because the cheapest inland water transportation rates in the world are those between the same points. All the railroads of the United States have been steadily lowering freight charges during the past twenty years, and largely, of course, because improvements in track and equipment have made this possible. Those roads, however, that have made the most improvements and the greatest reductions in rates are the great trunk lines leading into New York from the West, those that compete with the Great Lakes, the Erie Canal, and the Hudson River. The average freight earnings per ton mile of all the railways of the United States for the year ending June 30, 1890, were ·941 cents.* The ton mile earnings of the New York Central and Hudson River Railroad were ·730 cents, and on the Pennsylvania Railroad, ·661 cents; on the Lake Shore and Michigan Southern, ·653 cents, and on the Michigan Central, ·726 cents; whereas the average earnings per ton mile on the Chicago, Milwaukee, and St. Paul, and the Chicago and North-western, roads coming but slightly into competition with the Great Lakes and other waterways, were 1·06 and 1·03 cents respectively. The following table, showing the wheat rates per bushel from Chicago to New York for the years 1870, 1880, and 1889, by water, by water and rail combined, and by rail, indicates very plainly how freight rates have fallen, and how this movement has been led by the waterways:—

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* For the year ending June 30, 1891, they were ·895 cents.

—	By Lake and Canal.	By Lake and Rail.	By all Rail.
1870,	17·10 cents.	22·0 cents.	33·3 cents.
1880,	12·27 "	15·7 "	19·9 "
1889,	6·89 "	8·7 "	15·0 "

The important influence of the Erie Canal on freight rates has often been emphasized; only a few facts need be given here. They are for the year 1891. The Erie Canal was opened in May, at which time the pool rates on grain from Buffalo to New York were seven and four-fifths cent. per bushel. The grain rates on the canal for the various months of the season were—May, 2·51 cents; June, 2·53 cents; July, 2·68 cents; August, 3·94 cents; September, 4·19 cents; October, 4·44 cents; and November, 4·13 cents. The railroad pool rates, though nominally unchanged, were not maintained. Mr. Edward Hannan, Superintendent of Public Works of New York, says: 'My information on that subject, which has been received from private sources, is that contracts were made by the various railroads to carry grain in the months of June, July, and August, for four cents a bushel; September, four and one-half; and October, five cents. On petition of the Merchants Exchange, of Buffalo, the Superintendent of Public

Works kept the canals of New York State open five days longer than the allotted time. This shows very plainly that shippers regard the canal as a freight regulator. When the canals closed for the winter the railroad charges again rose to the pool rates.'"

To return now to the interesting question of the division of labour between canals and railways which the characteristic quality of each means of communication would dictate, and which is actually in operation in countries where this problem of transit is considered from a broad national standpoint, and where consequently a unified system of inter-communication exists.

Bulky raw materials* naturally constitute the larger share of the actual traffic on canals in every country; the kind of the raw material depending, of course, on the industrial character of the district served by the particular canal. The classes of commodities carried by the Irish canals in 1899 will be found in the Board of Trade tables quoted on pages 138 *et seq.* of this Report. They consist mainly of coal, bricks, timber, sand, turf, oats, flour, grain, porter (which is 25 per cent. of all traffic on the Shannon and Maigue Navigations), and such agricultural requirements as artificial manures, grass seeds, &c., besides a fair proportion of "general cargo." In a country like Ireland whose soils vary so much in kind, there being large districts of moory land, heavy clays, shallow soils lying immediately upon limestone plateaux, and friable loams on basaltic or igneous formations, the farm produce is affected very diversely by the varying conditions of sun-heat and rainfall in different seasons, so that it is not unusual to have a heavy root crop in one district while in others it is of poor quality or scanty in bulk. In the absence of cheap transport for bulky crops such as potatoes or turnips, the local glut or scarcity rules the market prices; so that the profits of agriculture are subject to more violent fluctuations than would obtain if there were better facilities for distribution. The railway freights are necessarily disproportionate to the value of such products. However, since the "inward" exceeds very largely the "outward" traffic to seaports by reason of the scarcity of manufacturing industries in Ireland, it is, perhaps, worth consideration whether lower rates for such class of goods might not remunerate the carrying companies by utilizing the empty return wagons. Here, certainly, an efficient inland navigation service would serve the farmer. The same general classes of commodities, as quoted above, are found in the traffic-lists of continental waterways. Of the freight brought to Berlin for instance, in 1890, 49 per cent. consisted, according to the official returns, of stone and brick, 21 per cent. of lime, earth, sand, &c., 10 per cent. of wood, 7 per cent. of coal, and 6 per cent. of grain. Again, an official analysis made some years ago of the traffic carried on French canals gives the following results: construction materials and minerals, 28 per cent.; agricultural produce, 14·4 per cent.; timber, 8·6 per cent., metals, 7 per cent.; manure and accessories, 5·3 per cent.; and so on. A consideration of the character of this traffic makes it evident that the province of the waterway in transportation is a narrower one than that of the railway. The latter naturally takes all passenger traffic, all perishable goods, nearly all

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* This must not, however, be interpreted too strictly. Mr. F. de Vismes Kane, a former Chairman of the Grand Canal, writes me on this point: "Undoubtedly heavy traffic is well suited for canals. But if it were not that we carried large quantities of lighter goods—merchandise of all kinds—even furniture, drapery, crockery, tobacco, and groceries of all sorts, paying *good* freight, we could scarcely have maintained the service on the Grand Canal. Given good, staunch boats, we can well compete with railways in these things where *haste* is not required; and as for whiskey and tea, and valuable goods of that kind, we can lock up the holds and prevent pillage entirely. We did a large business sending whiskey sealed down all the way to Limerick; and furniture is most safely carried. To Naas we had a boat which delivered goods earlier than the railway. Our service was a continuous one—night and day—so that the difference in speed was not great for short distances."

"smalls" traffic, and practically all live stock, and as it happens, these are precisely the classes of traffic which are most remunerative on railways. It is significant, by the way, of the influence of waterway rates on railway rates, that while goods rates have been reduced very considerably within the past two decades, passenger fares, in which there is practically no water competition, have declined to a far less extent (except, of course, in urban areas, where the competition of the tram system has been felt). This is a phenomenon observable in every country where there is genuine competition either between waterways and railways, or by railways *inter se.** The following Table for the United States will serve to illustrate this tendency :—

Year.	Rate per Ton-mile.	Rate per Passenger-mile.
	Cents.	Cents.
1884,	1·124	2·356
1887,	1·034	2·276
1890,	·927	2·174
1893,	·893	2·072
1896,	·821	2·034

Accompanying this decrease (outside of this country) in rates for goods there has been, needless to say, a wonderful increase in the goods traffic in comparison with the passenger traffic. In fact, it is this very increase of freight traffic—which is obtaining a greater and greater preponderance in the entire traffic of the railroad—which has again brought prominently forward the question of waterway transit. Heavy goods traffic is the least profitable traffic for a railway to handle, and the provision for it in the matter of sidings, double and even (as on the English trunk lines) quadruple lines, reduces the small margin of profit, where

Comparative Cost of Railroad and Water Haulage.

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* See, however, for Irish Railways the Statements on pp. 53-54 of this Report.

there is any serious competition, to a still lower figure. It has been estimated* that a gross income of more than £30,000 a mile is earned in England off a single pair of tracks by a traffic exclusively in passengers or goods carried at passenger speed. About £8,000 per mile is said to be the largest revenue earned by any line of mixed traffic, and £6,200 a mile has been earned on mineral lines proper. On the other hand, a moderate estimate of the cost of carriage of heavy materials by canal places it at less than a third of the corresponding cost by railway. The late Mr. Francis R. Corder, C.E., who gave important evidence before the Select Committee on Canals, 1883, put in, *inter alia*, an interesting document (which will be found, p. 234 of the Report [C. 252—1883] of that Committee) dealing with the comparative costs of Railway and Canal transport. Mr. Corder was certainly an enthusiast for inland navigation, and, possibly, tended to an optimistic view of the possibilities of canal traffic, but his main contentions are unquestionably sound, and his statement of the case, though worked out nearly twenty years ago, still deserves study. I accordingly quote the following extract :—

> The main causes which render transport by canal cheaper than transport by railway are, writes Mr. Corder, the following:—
>
> (1.) In canal transport there is no item of cost corresponding to the wear and tear of rails, sleepers, and fittings, or to the replacement and maintenance of permanent way. These items form 13 per cent. of the working expenditure of the railways of the United Kingdom.†
>
> (2.) A corresponding saving, which there are reasons for estimating as equal to the former, is made in the repairs of vehicles and locomotives, due to the damage caused by the reaction of the rigid way.
>
> (3.) The maintenance of the works on a canal is on the average much less costly than the corresponding outlay on a railway; not only from the absence of vibration, but from the much smaller magnitude of the works themselves. The average cost of the railways of England and Wales is £46,000 a mile. That of the canals, as far as it has been ascertained, is not more

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* See "Index to our Railway System," by William Fleming, No. III., 47.

† *Vide* "Index to our Railway System," No. III., p. 24.

than £3,350 per mile. The average cost of 18 of the principal English canals was under £10,000 a mile; that of the Birmingham Canal, of which, in 1865 the original £1,000 shares were each worth more than £30,000 in the market,[*] was £15,000 a mile. The cost of the Manchester, Sheffield, and Lincolnshire, and of the Lancashire and Yorkshire Railways, which offer the best parallel to the Birmingham Canal, averaged £65,700 per miles. Thus, for equal volumes of traffic, the cost of the maintenance of works on a canal will be less than one-fourth of that on a railway. The cost of this item on the railways of the United Kingdom is 7 per cent. of the working expenditure.[†] In the annexed table I have taken one-third of this for the cost of canal maintenance.

(4.) The resistance to traction on a level railway, at the speed of 30 miles an hour, is exactly 10 times the resistance to traction on a canal, at a speed of 2½ miles an hour.[‡] The force that will draw a load on a canal at four miles an hour is just half that required to draw an equal load on a railway at 35 miles an hour. The economy of tractive force is thus in inverse proportion to the speed of transport. Traction, on the railways of the United Kingdom, costs 16 per cent. of the expenditure. I have taken it at half that figure on canals.

(5.) It is not so evident why the item of traffic expenses, which forms[§] 30 per cent. of railway expenditure, should be so much lighter on canals. It is, however, in evidence that it is so. I have taken the proportion, from the French returns, at one-fifth of this rate.

(6.) The items of duty and general charges, which amount to 15 per cent. of the English expenditure on railways, follow nearly the same proportion as the traffic expenses, on the French canals. I have, however, allowed an equal proportionate charge to that of the railways for the English canals.

I can thus state with confidence that the following table underrates the economy to be attained by the use of canal transport for heavy traffic.

Out of every £200, paid for an equal tonnage transported an equal distance, the detailed costs are:—

ITEM.	By Railway.	By Canal.
Maintenance of Way, . . .	13	0
Maintenance of Works, . . .	7	2·3
Repairs of Rolling Stock, . .	19	6
Traction, ...	16	8
Traffic Expenses, ...	30	6
General Charges, ...	15	15
Interest on Capital, . . .	100	33·3
TOTAL, . .	200	70·6

Showing an economy of 64·7 per cent. by canal.

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[*] *Vide* "Du Régime des travaux publics en Angleterre." Par Ch. De Franqueville. Paris 1875. Vol. II., p. 301.

[†] "Index to our Railway System," No. III., p. 24.

[‡] *Vide* "Transactions of the Institute of Civil Engineers," Vol. I., p. 173, and Locomotive Engineering, by Z. Colborn, Vol. I., p. 291.

[§] "Index to our Railway System," No. III., p. 24.

"I may point out," adds Mr. Corder, "that in the case of the transport of fish, of light parcels, and of any commodities for the rapid carriage of which it is worth while to pay treble freight, the question of time has to be set against that of cost. But mineral trains rarely run at higher speed than fifteen miles an hour, while the time consumed in waiting in sidings is so much, that on one important line the locomotive superintendent has stated that the average rate of some of the trains, covering all stoppages, was not above five miles per hour."

It is clear from considerations such as these—and Mr. Corder's calculations are, I believe, still substantially true—that the canal, under normal conditions, could by division of appropriate traffic, both be an aid and a complement to the railway. Against this view, seemingly, is the strange apathy of these railways who own canals in the United Kingdom in regard to that portion of their property. It is commonly believed, that railway proprietors are good judges of their own interests, and presumably there are reasons for the neglect of the railway-owned canals. I have already quoted Sir Michael Hicks-Beach on this subject. A single fact will illustrate the case as vividly as pages of argument. Between 1888 and 1898 the traffic on independent canals in the United Kingdom increased by over 5,000,000 tons; on the railway-owned canals, in the same period, the traffic decreased 2,000,000 tons. The Midland Great Western Railway Company of Ireland, which purchased the Royal Canal for a sum of £298,059, and have, since 1845, expended on it, according to the Board of Trade returns, a sum of £109,313, do not themselves act as carriers over that waterway, being simply toll-takers to the extent of £2,713 in the year 1898. Of course, it must be remembered that the tonnage of heavy goods traffic on an Irish railroad cannot compare in volume with that on any of the trunk lines of Great Britain, and still less with that on the chief transatlantic lines.*

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* Mr. J. Thompson, President of the Manchester Chamber of Commerce, and one of the members of a deputation which waited on the President of the Board of Trade last year in reference to the canal system of the United Kingdom, is reported (*Times*, December 14th, 1900) to have said that "the railways had reached the limit of their capacity for heavy traffic, and they all felt that the canals were a very valuable and imperfectly utilised mode of transport, and were capable of great improvement."

There is seldom in this country a serious congestion of freight traffic as is, indeed, evidenced by the fact that out of the total mileage of 3,176 only 621 miles are double (or more) lines. The Great Western of England has more than twice as great a mileage as the whole Irish railway system under double (or more) lines.

Hence, on the one hand, the railways can, in a country like Ireland, provide for this class of heavy goods traffic proportionately cheaper—I mean, at less cost to themselves*—than can be done on English or American lines, while, on the other, the absence of a fully-developed free water competition enables them to maintain freight charges, in most cases, at a non-competitive and therefore very remunerative level. However, the issues involved in a careful review of the causes affecting freight-charges on railways are peculiarly complex, and could only be adequately dealt with by a railway expert. I make no pretence of discussing them here further than to make the above somewhat obvious comments on an apparent paradox,

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* Having regard (in the case of Ireland) to the smaller quantity of capital expenditure involved, the lack of expenditure on additional tracks, sidings, goods stores, &c., and particularly the considerably smaller outlay on wages and salaries. In connection with the latter, the following Board of Trade returns are suggestive :—

EARNINGS OF RAILWAY SERVANTS.

Country.	Number of Workpeople employed (First Week in December).			Average Wages per Head.		
	1897.	1898.	1899.	1897.	1898.	1899.
				s. d.	s. d.	s. d.
England and Wales (16† companies).	339,883	353,785	371,490	24 10½	25 1½	25 9¾
Scotland (5 companies), . ,	40,871	41,148	42,660	22 5¼	22 7½	22 10¾
Ireland (8 companies), . .	17,354	17,571	17,708	19 5	19 4¾	19 4½
TOTAL for 29 companies, .	398,108	412,304	431,858	24 4¾	24 7¾	25 3

NOTE.—The workpeople included in the table are those employed in the coaching, goods locomotive, and engineers' departments of the Railway Companies. The 29 Companies making returns employ over 90 per cent. of all the railway servants in the United Kingdom.

† Two of these are now under one management.

so far as it concerns Ireland. What attention I have given to the question, has convinced me of the truth of two propositions in regard to Irish transit problems: the first is that the interest of the proprietors of a railway company, and the interests of the community served by the company are not, *if we confine our attention to periods of comparatively short duration*, necessarily co-incident; the second is that a considerable increase of goods and passenger traffic is awaiting even a moderate reduction of railway rates and fares.

Inland Navigation in France and Germany.

It remains to see how keenly foreign countries are interested in the preservation and development of water-transit facilities, and how they recognise that canals are the complements rather than the competitors of railroads. There existed a right of toll on the rivers and canals in France up to 1880, but it was abolished by a statute of 19th February, 1880; and since that date the State has no longer charged any rates on boats and merchandise passing along the canals and rivers any more than on carriages and goods going along the roads. The passage through the locks is free even at night, without payment, and the State pays the lock-keepers, who work the gates day and night. There remain only a few canals, formerly handed over to some companies, on which these companies levy tolls. These are very profitable to the shareholders. The State has already re-purchased a good many concessions of canals, and it is intended to re-purchase the rest so as to abolish all tolls. Previous to 1880 the tolls in navigation were low, amounting to from ·015*d.* to ·03*d.* per ton per mile-for the rivers, and ·03*d.* to ·076*d.* for the canals, according to the classes of goods. Since 1841 France has devoted over eighty million pounds sterling to the construction and improvement of the national waterways, and now annually contributes about 30,000,000 francs (roughly £1,200,000) for maintenance and staff.*

A most suggestive French experiment, illustrating how a suitable waterway charging moderate freights can practically create its own traffic, is found in the case of the canal of Marne-au-Rhin. This navigation runs parallel, for a greater part of its length, with the railway from Paris to Strasburg, and 83 per cent. of its present traffic is contributed by neighbouring industries which came into existence subsequent to its foundation. M. Picard, President of the Section of Public Works, at the State Council, speaks of the canal as having given a wonderful impetus to the mineral and other industries of Lorraine—industries which could not have been born, according to him, except for cheap transit facilities such as these provided by the Marne-au-Rhin Canal. "Minerals which," says M. Picard, "lay undisturbed before its construction are now being actively extracted; factories and furnaces are so numerous upon its banks, and press so closely upon each other, that one might imagine them sprung up from the earth." In fact, "83 per cent. of the industries upon its banks have been established since the canal was cut." When we turn to Germany,† we find the same far-sighted zeal on the part of the Government for the development of inland navigation. In spite of the great extension of railways in Germany, the traffic on the waterways is growing absolutey and relatively. It rose between 1875 and 1885 from 21 per cent. of the total traffic to 23 per cent.; and while the increase of goods traffic on the railways amounted in the same decade to 52 per cent., that on the waterways reached 66 per cent. "The German Government has," writes Mr. Gastrell,* Commercial Attache to H. M. Embassy at Berlin, "systematically tried to establish in this country a combined net work of waterways and railways; *and they have recognised the practicability of both working well together, the canals taking the bulky part of the heavy traffic, which does not require rapid transport.*" Quite a remarkable instance of the truth that the growth of a canal trade may be accompanied by an increase in the traffic and profits of a competing railway, is afforded by the canalization of the Main from Mayence to Frankfort. The Main improvement works were completed in 1886. The following table gives the tonnage by rail and by water for the three years before and for the three years succeeding the canalization of the Main :—

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* Quite recently the French Government laid before Parliament estimates to the amount of 650,000,000 francs for the improvement and extension of the French Canal System. See, however, a somewhat adverse criticism of this Scheme in the first February (1902) issue of the *Revue des Deux Mondes.*

† See on German Canals an excellent article entitled "Relative advantages of the Railways and Waterways of Germany," *Journal* of the Royal Statistical Society, Vol. LI.(1888), pp. 375, *et seq.*

Year.	Traffic on Waterways.	Increase over Previous Year.	Traffic on Railways.	Increase over Previous Year.
	Tons.	Tons.	Tons.	Tons.
1884, ...	150,513	–	864,005	–
1885, ...	150,805	281	897,040	33,035
1886, ...	155,956	5,151	932,090	35,050
Average for the 3 years,	152,425	–	897,712	–
1887, ...	360,062	204,106	1,013,628	81,538
1888, ...	516,798	156,735	1,231,935	218,307
1889,*	577,610	60,812	1,334,148	102,213

* There was a strike of railway and canal operatives in this year, which explains the relative decline in increase of tonnage both for waterways and railways.

The moral of this table is that coincident with an increase of traffic on an improved waterway there can be an enormously increased freight on a competing railroad. The great gains in the tonnage of the railroad since the canalization of the Main as compared with the gains before is seen if the yearly increase is noted. Nor was the increase merely temporary. I have obtained the most recent figures available both of railway and water traffic, and they show a practically uninterrupted increase of freight on each route :

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* Foreign Office Report on the Development of Commercial Industrial Maritime, and Traffic Interests in Germany, 1871 to 1898.

Year.	Traffic on Waterways.	Traffic on Railways.
	Tons.	Tons.
1894, . .	724,000	1,775,306
1895, . .	617,000	1,99,1006
1896, . .	861,000	1,946,515
1897, . .	765,000	2,135,779
1898, . .	914,000	2,395,461
1899, . .	900,000	2,479,047
1900, . .	1,112,000	*

The economic use of waterways makes raw materials cheaper, and thus increases and extends industry ; increased transportation follows necessarily on increased production ; by this means the development of waterway traffic reacts favourably on railroad freights. The case of the canalization of the Main certainly seems to point that way. It is, of course, possible that the growth of traffic between Frankfort and Mayence may, in some measure, have been due to the recent general progress of the industrial movement in Germany, but the total increase cannot, in my opinion, be thus explained.

The British Consul at Stuttgart, in his Annual Report for 1900–1901 upon the Trade of Wurtemburg (Foreign Office, Annual Series, No. 2,732), emphasises the importance attached in Germany to the construction of canals and the utilisation of rivers as a means of cheap transport. From 1877–97 the number of river and canal boats has increased from 17,653 to 22,564, an advance of 28 per cent. ; the carrying capacity, however, has increased from 1,400,000 to 3,400,000 tons, or about 143 per cent. If this latter number, 3,400,000 tons, is compared with the loading capacity of the German sea-going fleet upon January 1, 1898, which amounted to 2,400,000 tons, it will be seen that the carrying capacity

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* Railway returns for 1900 not yet available, but an estimate puts them at 2,500,000 tons. I am indebted for these figures to my friend Dr. Moritz T. Bonn of Frankfort-on-Main.

of the river and canal boats surpassed the loading capacity of the sea-going fleet by about 1,000,000 tons. A comparison of the relative size of the river and canal boats reveals that the number of small boats of 200 tons shows only a slight increase; that the number of those between 200 and 400 tons has almost trebled itself (967 as compared with 2,673); and that, finally, the number of large river and canal boats above 400 tons has increased tenfold (from 137 to 1,541). The number of steamers shows also a great increase, having risen from 570, with 35,000 horse-power, to 1,953, with 240,000 horse-power, including an increase of passenger steamers of from 269 to 844, and an increase in tug-boats and steam freight boats of from 301 to 1,109. This increase in the number of boats and the increased utilisation of the loading capacity have reduced the costs of transport on German waterways during the period of twenty years mentioned above by about one-half, so that the present cost of transport per mile and ton amounts to something less than ¼*d.*

Value of Canals to Agriculture and Industry.

A vivid illustration of the value of canals to agriculture is afforded by the case of the reclamation of the district of France immediately west of the Loire, known as La Sologne. Mr. O'Neill, British Consul at Rouen, has admirably described* this region and its transformation by means of the facilities offered by the Canal de Sauldre. "Nearly 1,000,000 acres, comprising no inconsiderable portion of the three departments, the Loir et Cher, the Cher and the Loiret, lie within the westward bend of the Loire, and they are composed of a soil that, unfertilised, is of absolutely no agricultural value. In parts the clay appears on the surface, but over the greater portion of its area the sand lies with some thickness upon a stiff impermeable clay. Left alone," writes Mr. O'Neill, "it will produce nothing of value. It is a country of sand and heather, broken up by innumerable ponds and marshy tracts, as unhealthy as they are unprofitable. Immense efforts have been made for 40 years past to reclaim these lands by planting the sandy tracts with pines, by draining the stagnant surface waters and by the transport there for intermixture with the sand of a calcareous marl, which is obtained from the northern slopes of the Sancerrois Hills that limit this district on the south-east. Nearly 200,000 acres have been turned into a pine forest; drainage of stagnant waters and proper irrigation has made good pasture land of much that lies in proximity to the rivers running through the district—the Cosson, the Beuvron, and the Sauldre. But nothing could have been done to fit the land for the culture of cereals and other more profitable products had not the Canal de Sauldre been cut right into the heart of the district from a more favoured country yielding the calcareous elements of which the soil of the Sologne was wholly deprived. For 40 years the transport of "marne," or calcareous marl, has gone steadily on, and it is now computed that over 1,000,000 tons of this fertiliser have been carried by it and distributed over the poorer adjacent lands. The canal has been the main agent in the transformation of the country to a distance of 10 and 12 miles from its banks. Pastures enriched produce now from 30 to 35 hectolitres of hay per hectare; wheat is grown, and a return of from 25 to 35 bushels an acre obtained upon land that before only yielded the poorest crop of rye; beetroot and artichokes are amongst the latter crops of the district, and stock is fattened on many of the farms for the Paris market. The influence of the canal upon the agriculture of the district is such that we are told the selling value of land increases or decreases as it approaches or recedes from the banks of the canal, that is, from the means of obtaining at a low cost of transport the 'improvements' of which, from the poverty of the soil, it stands in need. It is not surprising to hear after this that the general cry of the inhabitants of the district is for an extension of the canal to the banks of the Loire and the Cher, so that they may be put into communication by water with the navigable portions of those rivers. So far the chief function of the canal has been to bring them the fertilisers by which their land has been reclaimed; what they ask for now is its extension to assist them to carry off and find markets for its heavier products." Mr. O'Neill, in the same report, gives two striking illustrations of the practical elimination of distance and the cheapening of raw materials by the easy and cheap communication afforded by suitable canal communication. These are well worth quoting in full, as they throw light on some of the arguments in favour of waterway transit to which attention has already been called:—

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* In an excellent report on "The Fluvial Traffic of the Rouen and Waterways of the Seine basin." [C. 7582—27] *Foreign Office Reports, Miscellaneous Series*, No. 366.

> Amongst our [*i.e.* of France] imports (writes Consul O'Neill), is a considerable quantity of feldspar from Norway. The chief part of this feldspar goes by lighters, of course, into the heart of France, into the Department Loiret. There, upon the banks of the Canal de Briar, is an immense button manufactory. Over 1,500 men are employed in it and the sewing of the buttons on the cards on which they are sold all the world over gives occupation to many thousands of women and children in the surrounding country. Crushed up, and—curious detail—set with milk, for which purpose more than 100 cows are kept upon the premises, this feldspar from the mountains of Norway serves as the material from which buttons are made. On observing this singular importation, one naturally asks, not without surprise, "How is it that a manufactory in the heart of France is importing feldspar from Norway when the granites and other feldspathic rocks of the central mountains of the country must provide this raw material in abundance?" All the feldspars, the common feldspar (orthoclase), lime feldspar (anorthite), and soda feldspar (albite), are to be found in abundance in the French central mountains. There can be nothing, therefore, peculiar to the feldspar of Norway, nothing in the feldspars imported that is wanting in those of France. The answer, I believe, is simply this. The mountains of Norway are, from the point of view of cost of

transport, nearer to the manufactory upon the banks of the Canal Briare than are the mountains of Limousin, in France, where feldspar abounds, although these are only distant from the Department Loiret 90 or 100 miles. But there is no water communication between these two points. The physical difficulties raised by the intervening spurs of the central mountain mass, and the courses of such torrential streams as are the Vienne, Creuse, Indre, and Cher in their higher beds, prevent the development of canal construction in those regions. And such a raw material does not well support transport charges by rail.

The other instance I will give is that of the importation of kaolin. No fewer than 43 British ships arrived here [*i.e.* at Rouen] last year laden with this product. Kaolin, I need hardly say, is a clay derived from the decomposition of granite, or more particularly from the decomposition of one of the chief constituents of granite, feldspar, from which the soluble constituents have been carried off in chemical combination with the carbonic acid of rain-water, and the insoluble, silica and alumina, have remained, and washed down, form the clay known by that name. It is, therefore, chiefly found in the neighbourhood of granite mountains, and 38 of the British ships that came here with cargoes of it last year arrived from Cornish ports, to which it is sent from the quarries in the granite hills of that country. The remaining five came from Poole, which provides also from the eocene beds in its neighbourhood a kaolin of slightly less pure quality. A very large proportion of these cargoes was sent right across France into Alsace by the canal that joins the basin of the Seine to that of the Rhine, crossing the valleys of the Meuse and Mozelle, a distance of over 700 kiloms. by water. Here again we have a mineral product that is not a stranger to France. The fact alone that an import duty of 3 fr. 50 c. a ton is levied upon it shows clearly enough that there is an industry in its extraction which has to be protected. A small quantity is extracted in the neighbouring Department of the Somme, but it is chiefly quarried at St. Yrieix, in the Haute Vienne. The porcelain industries of Limousin owe their existence to the extensive deposits of kaolin, due to the decomposed granites and pegnatites of that neighbourhood, and more than 20,000 tons are extracted there annually. The same cause has, however, operated here as in the case of imports of feldspar. The excellence of the water routes in the Seine basin has brought the quarries of Cornwall within easier communication of the manufactories in Alsace than are the districts within France where this product is most plentiful.

It is unnecessary to quote any further evidence from other countries as to the renewed interest and activity on the part of foreign governments in regard to securing for waterways their due position and influence in a national system of transportation. Belgium and the United States, in particular, have displayed a wise prevision in the matter. It is quite possible, of course to overdo the argument from foreign analogies, and even to misconceive the lessons of statistics of other countries.

I must not be understood as implying that (even apart altogether from the vital difference of State-ownership of railways and canals), conditions at home and abroad are so similar as to admit of the direct and immediate application of a successful experiment in France or Germany to the necessities of our own industrial position.

It is, at the same time, impossible to reflect on the potential value of our own neglected waterways, and the vital need Ireland has, and will more and more have, for cheap transit facilities, and to consider the concurrent testimony of every progressive country as to the importance of water-transit, without wishing to see the lessons of foreign experience applied in a broadly-conceived policy to the general control and direction of a system of waterways, natural and artificial, not inferior probably, if rendered efficient, to these draining any similar area in the world. The gist of the whole matter is admirably summed up in the following resolution of the Fourth International Congress on Inland Navigation :—" The existence and development together of railways and waterways is desirable, first, because these two means of transport are the complements of each other, and ought to contribute each according to its special merits to the public good ; second, because, viewed broadly, the industrial and commercial development which will result from the improvement of the means of communication must in the end, profit both railways and waterways."

Another consideration with regard to canals in Ireland is the opportunity they offer for industrial enterprise to boat owners plying on tolls. On the Grand Canal, in spite of low tolls and every encouragement by the Court of Directors, the number of privately owned barges has of late years fallen off greatly, showing a want of energy in this direction in the country parts, coupled perhaps with a lack of capital. On the other hand the Ulster and Northern section of canals is entirely worked on this plan, which is by far the preferable method, and would doubtless attain much more considerable dimentions if the waterway were put into such a condition as to insure a continuous and reliable service.

(c.) *Sketch of the History of Inland Navigation in Ireland.*

If our system of Inland Navigation, as a whole, has so far proved disastrous as an investment of capital, it cannot be said it was from lack of an adequate conception of what a network of waterways in a country like Ireland should be. So far back as 1715, the Irish Parliament passed a statute for encouraging a scheme of drainage and inland navigation of truly national proportions, which—though executed in a spasmodic and piecemeal fashion—was still the goal at which all subsequent legislation aimed. The interests of arterial drainage and the interests of navigation were not, it is true, always reconcilable, and a good deal of misdirected effort was caused by hesitancy between the relative importance of the one and the other. But, on the whole, the scheme was a sound one in its inception, and its failure must, in my opinion, be looked for in the nature of the machinery originally provided to carry it out, and in the successive shiftings of responsibility for its conduct and maintenance between State departments, mixed boards, local companies, and private companies, rather than in any intrinsic causes. The following interesting sketch of the early history of Inland Navigation in Ireland is taken from the Report [C.–3173] of Lord Monck's Commission of 1883:—

First Statute on
Inland Navigation
in Ireland,
1715.

The Report of a Committee of the Irish House of Commons on Inland Navigation, presented on the 23rd June, 1800, states that "Inland Navigation has been an object of Parliamentary attention from a very early period, the journals stating proceedings and grants from the year 1703," but the first statute on the subject was an Act passed by the Irish Parliament in the second year of George I. (A.D. 1715), and entitled "An Act to encourage the draining and improving of the Boggs and unprofitable low grounds, and for easing and dispatching the inland carriage and conveyance of goods from one part to another within this kingdom."

This Act, after reciting that the great tracts of bog and fenny waste grounds, which encumber the midland parts of this kingdom, are not only useless to the owners, but an occasion of a corrupt air, and a retreat and harbour for malefactors, and that it has been ascertained that navigable and communicable passages for vessels of burthen to pass through might be made, from and through the said midland counties into the principal rivers, and that by the benefit of such master drains, the bogs and other lost grounds might be improved, and also a cheap and expeditious communication betwixt His Majesty's subjects inhabiting the several parts of his said kingdom might be opened, proceeds to authorize certain persons, whose names are given, and who are styled "undertakers," to make "at their proper costs and charges" the river Shannon navigable, "portable and passable," for boats, barges, lighters, and other vessels of burthen from the common landing-place of the city of Limerick to the town of Carrick Drumrusk (now Carrick-on-Shannon) in the county of Leitrim.

Full powers are given to the undertakers to adopt every measure necessary for their purpose, and in order to repay themselves for their original outlay and for the expense of keeping the navigation in order, they are authorized to take "to their own use" twopence toll for every 100 lb. weight conveyed ten miles, and threepence for every passenger conveyed the same distance. The Members of Parliament and the Justices of the Peace for counties adjoining the navigation are nominated Commissioners for adjusting all differences that may arise between the undertakers and the proprietors of the lands adjacent to the river. The Act goes on to empower similarly qualified Commissioners in the districts drained by the "Liffy," the "Rye," the "Boyne," the "Mungagh," the "Brosney," the "Barrow," the "Glyn," the "Bann," the "Foyle," the "Earn," and in short nearly every river in Ireland, to appoint undertakers to make and keep navigable the said rivers, and to open communication between them and adjacent bogs and other lost and useless grounds. No navigation seems to have been undertaken under the provisions of this Act, except that of the river Maigue, which connects the town of Adare, in the county of Limerick, with the river Shannon, a distance of eight miles. No attempt was made at that time to improve the Shannon. The next Act of Parliament referring to drainage and navigation was passed in the eighth of George the First, and merely amended that of second George the First in regard to the numbers and powers of Commissioners.

Act of George II.
"Commissioners of
Inland Navigation
appointed," 1729.

In the third year of George the Second (1729) an Act was passed referring to the failure of the original Act (second of George the First) to accomplish its purpose by reason of "undertakers" not coming forward to execute navigation works on account of the expense and risk incurred in doing so, and appointing the Lord Lieutenant, the Lord Chancellor, the four Archbishops, the Speaker of the House of Commons, together with eighty other persons, Commissioners for Ireland to put the said Act into execution, with power also to encourage tillage, and to employ the poor on works of public benefit, and providing them with funds for doing so from duties afterwards called "tillage duties," levied on carriages, on cards and dice, and on gold and silver plate, the proceeds of which duties for twenty-one years were appropriated to their use. The only navigation works that were undertaken by the new Commissioners under the Act of 1729, appear to have been that connecting Newry with the Upper Bann and Lough Neagh, and the Tyrone navigation connecting Coalisland with Lough Neagh. It seems, however, that the Commissioners must have at any rate commenced other public works from the terms of the 23rd George II., chapter 5, which refers to the time for which duties were granted for the use of the Commissioners by the 3rd of George II., as being about to expire, and renews them for twenty-one years, "because divers sums of money arising from said duties had been applied towards making and carrying on several useful and necessary works," which works could not be made and finished without further supplies. It is probable that these useful and necessary works were roads and bridges, and possibly drainage operations, or embankments; but were not, with the exception of the Newry and Tyrone canals, for the purpose of navigation.

By the 25th of George II., chapter 10, the Commissioners were erected into a body corporate, with a perpetual succession and common seal by the name of the "Corporation for promoting and carrying on an Inland Navigation in Ireland," and thenceforward they were generally known and described as "The Commissioners of Inland Navigation." This Corporation continued in existence until 1787, when it was dissolved by the 27th George III., chap. 30, and the tillage duties by which it had been supported disappropriated. During that time it commenced the Grand Canal from Dublin to Ballinasloe, with branches to various places, the Lagan navigation which connects Belfast with Lough Neagh, the Barrow navigation from Athy to Scars, the Boyne navigation from Carrickdexter to Drogheda, and the Shannon navigation from Limerick to the Collieries on Lough Allen.

All these navigations, except the Grand Canal, which had been handed over to a company incorporated in 1772, and the Lagan which had become the property of a company in 1779, were, with the works, locks, houses, and everything connected with them, vested in local corporations, which were created by the same Act which abolished the Commissioners of Inland Navigation. All the navigations in Ireland, therefore, were in 1787, and for some time afterwards, in the hands of local corporations or private companies.

With respect to the proceedings of the Commissioners of Inland Navigation, the Committee of the Irish House of Commons already referred to reported as follows in the year 1800:—

> "Your Committee find that the period from which the bounty of Parliament for promoting inland navigation became conspicuous was that at which there appeared to be a surplus in the Treasury to the amount of nearly half a million, viz., about the year 1755. The avidity with which public grants were from that time sought after for inland navigations, as well as for other purposes, appears from the journals of the House, the objects of those grants being as various as the interests and inclinations of the petitioners.

"But the superintendence of a body so numerous as the corporation, and so little enabled to form a just estimate of the merits of the plans submitted to their consideration, was ill calculated to promote with effect the objects of their trusts, and the expenditure of the sums granted not being sufficiently connected with the permanent private interest or capital of individuals, it is much to be regretted that great sums of public money have from time to time been lavished without being attended with corresponding advantage to the public. A system of granting public monies at once so profuse and abortive was at length exploded, and in the year 1787 the Corporation for promoting Inland Navigation was dissolved, the tillage duties were disappropriated, and a system was adopted of granting aids to private undertakers proportionate to their private subscriptions."

Canals managed by Local Corporations and Private Companies, 1787–1800.

Under the system of granting aids from the public exchequer to private undertakers in proportion to their own contributions, the inland navigations were supported and continued from 1787 to 1800. Between those dates the following enterprises were begun:—

The Royal Canal, by the Royal Canal Company, from Dublin to Cloondara on the Shannon; and the Foyle navigation, by the Marquis of Abercorn, from Strabane to the river Foyle.

According to the Report of the Committee of the Irish House of Commons already quoted, the following sums had been issued before 1800 by the Treasury from the produce of the tillage duties, and under grants of Parliament and King's Letters, for promoting inland navigation, viz.:—

Issued from the produce of tillage duties from 1730 to 1790, ...	£351,946
Under grants of Parliament and King's Letters from 1750 to 1800, including the Lagan local duties, ...	505,436
Total, ...	£857,382

Appointment of a Board of Directors-General of Inland Navigation, 1800–1831.

In the year 1800 a new plan was adopted for promoting, completing and controlling inland navigation in Ireland. A statute (40th of George III., chap. 51 was passed which, after reciting that the means heretofore provided against the improvident expenditure of public money towards the furtherance of inland navigation have not answered the purpose expected, gives the Lord Lieutenant power to appoint five persons to be Directors of all works relating to inland navigation, with full power and authority to order, direct, regulate, and appoint all matters and things whatsoever relating to inland navigation. A sum of £500,000 was by the same Act granted for inland navigation and for the improvement of the Port of Dublin, which sum was to be expended as recommended by the Directors. All navigations and canals managed by local corporations and not private property were vested by the same Act in the Directors. The following is a list of the navigations either wholly or partially completed in 1800, when the Directors assumed office:—

1. The Maigue,
2. The Newry,
3. The Tyrone,
4. The Lower Boyne,
5. The Shannon.
6. The Upper Boyne,
7. The Barrow,
8. The Grand Canal,
9. The Royal Canal,
10. The Foyle,
11. The Lagan.

The four first-named became vested in the Directors as not being private property. The fifth (the Shannon) was partly vested in the Directors and partly in private companies. The six last continued to be managed as private undertakings. From 1800 to 1831 the inland navigation of the country was directly or indirectly managed by the new Board, and large sums of public money, in addition to the £500,000 granted by the 40th of George the Third, were given on their recommendation for the completion and support of the various navigations, both public and private. No new navigation was commenced during the rule of the Directors-General, but all those that were unfinished in 1800 were, except the Shannon, completed. The Royal Canal Company having become insolvent, the Royal Canal was vested in the Directors in 1814, and was finished by them. This canal was handed over to a new Company in 1822. The Grand Canal Company also became much embarrassed, but having received a large grant of money from Parliament in 1813 continued to manage their business themselves. The other private navigations likewise received large support from the public funds, but we are unable to state the exact amounts granted to each. The entire expenditure, both public and private, was, as will be seen further on, very great. In 1829 the Newry navigation was transferred to a private company. In the same year a Committee of the House of Commons reported that the permanent continuance of the Board of Directors General was "questionable." In 1829, as in 1800, it seems to have been a subject of regret that great sums of public money had from time to time been expended on inland navigation without being attended with corresponding advantage to the public.

Board of Public Works constituted.

On the constitution of the Board of Works in 1831 by the 1st and 2nd William the Fourth, cap. 33, all the property vested in the Directors of Inland Navigation, and all the powers possessed by them, were transferred to the said Board.

Since 1831 the following navigations have been constructed:—

1. The river Suir navigation, by a private Company, from Carrick-on-Suir to Granagh Ferry, near Waterford.

2. The Ballinamore and Ballyconnell navigation, from Lough Erne to the Shannon, by the Commissioners of Public Works, the expenses being defrayed partly out of public funds, and partly by advances charged on the districts adjoining the navigation.

3. The Upper and Lower Bann navigations, the former from Blackwatertown to and through Lough Neagh, the later from Lough Neagh to Coleraine, by the Commissioners of Public Works, at the expense partly of the public, partly at that of the localities affected.

4. The Lough Corrib navigation, from Galway to Cong, by the Commissioners of Public Works, at the expense partly of the public and partly of the localities affected.

5. The Ulster Canal, connecting Lough Erne with Lough Neagh, by the Ulster Canal Company.

This canal was vested by Act of Parliament in the Commissioners of Public Works in 1865, the Company having been unable to pay interest on an advance of £120,000 made to them by the Exchequer Loan Commissioners, who consequently took possession of the property. The Shannon navigation came under the exclusive management of the Commissioners of Public Works in 1846.*

The estimated total cost of these 708 miles of canal and river communication is £4,722,211, made up as follows:—

Charged on counties, ...	£385,364
Raised from private sources, . .	2,296,349
Public money, ...	2,040,498
Total, . . .	£4,722,211

After this general introduction to the history of Irish canals and inland waterways, some details of the course and development of the leading routes may be given. A reference to the accompanying map will show, at a glance, that there are in Ireland two main systems of waterways, viz., what may be called the "Northern Navigation System" and "The Midland and Southern Navigation System." As regards the former, starting from Coleraine, we find the Bann Navigation extending to and through Lough Neagh, into which converge the Lagan Navigation from the east, the Newry Navigation from the south-east, and the Tyrone Navigation from the west. After the junction of these navigations, the line of communication proceeds in a south-westerly direction by means of the Ulster Canal to Upper Lough Erne. After passing through that lough, which affords another branch navigation (northward) past Enniskillen to Belleek on the Lower Lough, the line is continued by the

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* This is not quite accurate—The Act 9 & 10 Vic., c. 98, provided, it is true, for the transfer, after the 80th September, 1846, of the powers and privileges of the special temporary Commission, who had control of the Shannon Works, to the permanent Department of Public Works in Dublin. Notwithstanding this Act, however, the execution of the works never received the concerted attention of the members of the new and enlarged Board. On the contrary, the superintendence of the works remained in the hands of the same three Commissioners, who, though they had lost their legal identity as Shannon Commissioners, by the Act 9 & 10 Vic., c. 86, continued to make annual reports separate and distinct from those of the Board of Works, as if the Act had never been passed. It was not till the works had been finally brought to a conclusion in 1850, that the full Board recognised amongst its duties the obligations, imposed upon it four years before by the Act of 1846, of controlling the Shannon Navigation and its works.

Ballinamore and Ballyconnell Canal as far as the Shannon, a little above Carrick.

The Royal Canal and the Grand Canal, in conjunction with the Barrow Navigation, may be said to form the Midland and Southern Navigation System of Ireland. These navigations are connected with the River Shannon, and, therefore, provide a line of communication by water from Dublin, and from important places in the Midland and South Eastern Counties, not only to the western districts, but also to the North of Ireland. There are, of course, other important separate navigations such as the Boyne Navigation, the Lough Corrib Navigation, the Maigue Navigation, and the Suir Navigation, which, however, cannot be said to form part of any continuous system. The Province of Munster is, it will be noted, curiously deficient in canals.

The Royal Canal.

The Royal Canal was commenced by a private company towards the end of the last century, assisted by grants from the Irish Parliament. It was subsequently taken up by the Directors-General of Navigation, and completed by them about the year 1822, when from first to last it had absorbed something over £1,400,000, of which £359,776 had been contributed out of public funds. The first Royal Canal Company was incorporated in 1789. It received before the year 1800 grants of public money to the extent of £84,000, and from the Union to 1813, further grants of £87,692. On inquiries before Committees of the House of Commons in 1811 and 1813, it appeared that the Company had expended on making forty-six miles of the canal from Dublin to Coolnahay, £704,877; of this, £171,692 had been granted as already mentioned. To provide the balance, and to pay the dividends and interest, which had been paid out of capital to an extent ascertained to exceed £369,231, the Company had borrowed upwards of £738,462, and raised on share capital £276,923. In 1810 the Company had a gross income of only £13,868, and a net income, after providing for maintenance and establishment charges, of only £3,813, to meet an annual charge for interest of £45,806. Upon the representation of the Committee of 1813 as to the insolvent state of the Company's affairs, the charter was forfeited and the property transferred to the Directors-General of Inland Navigation in Ireland, who expended, between 1815 and 1822, £182,871 of public money in completing the canal from the summit level to the Shannon. In 1818 the holders of debentures issued by the dissolved Royal Canal Company were constituted the shareholders in the new Royal Canal Company. It passes through County Dublin, between Counties Kildare and Meath, and through Counties Westmeath and Longford to Tarmonbarry, where it joins the Shannon. In pursuance of the Act 58 Geo. III., c. 35, the canal on being finished was handed over to a new company in 1822, by which it continued to be worked and managed till 1845, subject, however, to the supervision of a Board of Control, required under the same Act, to be appointed by the Lord Lieutenant. It was then purchased by the Midland Great Western Railway Company, under the Act 8 & 9 Vic., c. 119 (local). The annual cost of the maintenance of the works was estimated in 1878, at £4,650, and the annual receipts at £8,530.

The Lagan Navigation.

The Lagan Navigation connects Belfast with Lough Neagh. Its length is 25 miles 47 chains; six miles of which are river, and the remainder canal. The size of the smallest lock is 69 feet 6 inches long by 16 feet broad. The depth of water on the cills of the locks varies from 7 feet in wet weather to 5 feet in dry, and on one or two occasions within the last ten years has been only 4 feet 6 inches. The work which was begun about the year

1753, but not completed till the beginning of the last century, is in the hands of a private company who, under the provisions of 6 and 7 William IV., cap 107, pay a rent for it to the Government of £300 a year. It was stated by the Secretary of the Company in 1882* to be in perfect repair and working order with traffic sufficient, on an average of the last five years, to pay one and-a-half per cent. on the capital invested after providing for the cost of maintenance. For the purpose of the Lagan Navigation the water has not been shut up, nor the drainage power of the country interfered with in the district through which it passes. "For the purposes of through traffic, as at present carried on, into Lough Neagh, it is necessary that the water in the lake at the mouth of the canal (which, however, does not derive its supply from the lake) should be maintained at what is called by the witnesses who were examined "Summer level," that is to say at a depth of not less than 8 feet on the upper cill of Toome lock; but we shall observe on this point of the depth of the lake when reporting on the navigation of Lough Neagh. As far as the Lagan proper is concerned, the drainage of the country is in no way injuriously affected by it, the navigation is now profitably utilised, and there is no further outlay of public money necessary to put it into order or to maintain it."†

The Upper and Lower Bann Navigations.

The "Upper Bann Navigation" is something of a misnomer, as it is applied to that section of the Blackwater river which lies below the point of its junction with the Ulster Canal at Moy, and connects that canal with Lough Neagh. The distance from Moy to Lough Neagh is by water, 7 miles and 35 chains.

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* To Lord Monck's Commission.

† Report of Lord Monck's Commission.

There are no locks or artificial obstructions on this part of the Blackwater. The Navigation is maintained by the Upper Bann Navigation Trustees, out of funds raised from their entire district by local taxation.

The Lower Bann Navigation connects Coleraine with Lough Neagh. Its length is 32 miles 32 chains, of which 3 miles 12 chains are lake, 26 miles 40 chains river, and the remainder canal. The size of the locks is 130 feet in length by 20 feet in width. The depth of water on the cills is 8 feet. The Lower Bann is the only outlet for all the water falling into Lough Neagh. The works of the Upper and Lower Bann were, together with those of Lough Neagh, executed by the Commissioners of Public Works as both a navigation and a drainage work, between the years 1845 and 1859, at a total expense for the three navigations, according to a return made by the Commissioners, of £106,175, of which £69,078, was a grant of public money. The balance has been repaid out of county rates. A branch of the Northern Counties Railway runs parallel to the Lower Bann on the east, at an average distance of six miles for its whole length, and the Derry Central Railway runs parallel to it on the west, both railways competing with it for traffic. A railway is also projected from Ballymena to Portglenone. The works of the Lower Bann were handed over in 1859 to two bodies of trustees—one whose duty it was to maintain the navigation works, the other whose duty it was to maintain the drainage works only, and whose authority extends over the drainage of both the Upper and Lower Bann. They are called respectively the Navigation and Drainage Trustees. Both sets of works are maintained by local taxation, supplementing the receipts from water traffic as regards the expenditure of the Navigation Trustees. Lord Monck's Commission took in 1882 a distinctly pessimistic view of the possibilities of developing traffic on this

Navigation. "The average annual expenditure on the Lower Bann Navigation for the five years ending 30th June, 1880, was £1,154 15*s.* 8*d.* The average annual receipts from tolls, wharfage, rents, &c., for the same period were £93 14*s.* 1*d.* The deficit has been supplied by an annual presentment, made by the grand juries of the adjoining counties. These figures show that the navigation works have been practically maintained and the expenses connected therewith paid, not out of funds derived from traffic on the canal and river, but by local rates. We are satisfied from the evidence submitted to us that there is no reason to expect any considerable increase in the traffic. The testimony on this point is, in our opinion, conclusive."

The Ulster Canal.

The Ulster Canal, extending from Blackwatertown to Lough (Upper) Erne, was made by a company, formed in 1826 under 6 Geo. IV., c. 193. The works took about fifteen years to complete, and absorbed over £200,000 in capital, towards which the Government advanced on loan £130,000. When the canal was opened in 1841, the traffic proved unremunerative, and the water supply defective. In 1851 the Public Works Loan Commissioners took possession of the property as principal mortgagees, and proceeded to lease it, first to a private individual (Mr. Dargan), and subsequently to the Dundalk Steam Navigation Company. While under the management of this company, the canal works fell into very bad repair, and indeed became almost derelict. On the expiration of this company's lease in 1865, it was determined (but only after much hesitation), to vest the canal and undertaking in the Board of Works, Ireland, who were of opinion, in opposition to that of Sir John Macneill in 1861, that it was the deficiency of water, and not the railway competition, which had prevented its being remunerative. The transfer was effected by 28 & 29 Vic., c. 109. After an additional outlay of nearly £20,000 on the supply of water, the canal was re-opened in 1873; but the traffic on it has been very trifling. The annual expense of its maintenance was set down in 1878, at £1,200, which used to be provided for in the Civil Service Estimates (Class I.); and the receipts then only averaged £166 a year.

The Commissioners appointed to inquire into the system of navigation connecting Coleraine, Belfast, and Limerick community in this navigation, in their Report [C. 31731—1882] state that—

> "Notwithstanding the large sums laid out by the Commissioners of Works on the canal between 1865 and 1873, amounting, as has been stated, to £22,000, it is now, chiefly owing to leakage, in a very unsatisfactory state, and from want of water navigable only for eight months in the year. The traffic is also restricted even when the canal is fully supplied with water, by its shallowness and by the smallness of the locks. The boats in use on the Lagan canal cannot pass along the Ulster canal when fully laden, the depth of water in the channel of the latter being only four feet, whilst on the cills of the locks it is only three feet nine inches. On the Lagan canal vessels can generally be loaded so as to draw five feet six inches. The locks on the Lagan canal are sixteen feet wide. Those on the Ulster twelve feet two inches. Evidence has been submitted to us that by a further expenditure of £10,000 on the Ulster canal it may be deepened to five feet both in the channel and the locks, additional water supplied, and all the leakages staunched. Many witnesses expressed their confidence that if this were done a large traffic would spring up, and the canal would become a remunerative concern. But it must be observed, they add, that the Great Northern Railway competes with the canal for the greater part of its length, and to expect such an increase of traffic on the latter as would be sufficient to pay its present average expenses of £1,153 a year, in addition to £350, the interest of the £10,000 necessary to put it into order, or £1,503 in all, is in our opinion to take a very sanguine view of its prospects."

This navigation was transferred during the year 1890, to the Lagan Navigation Company, and has ceased to be maintained out of the Imperial taxes. In accordance with the Act of Parliament, an agreement was subsequently entered into between the Board of Works and the Lagan Navigation Company for transfer of the canal. This agreement bound the Company to expend

£10,250, the amount required, according to the estimate of the Board of Works' Engineer, to ensure a sufficient water supply and put the canal in order for a five feet draft for lighters, the draft formerly given by the Board of Works being only four feet. The Company proceeded to carry out the works, which cost £12,700 instead of the £10,250 estimated. Towards this sum the Treasury made a free grant of £3,500 and the Board of Works lent £4,400, repayable in forty half-yearly instalments with interest at 4 per cent. per annum, on condition that the Chairman of the Lagan Navigation Company lent £4,400 on same terms. The original defect of water supply to the summit level still remains, no attempt having been made to increase the size of the storage reservoir, or to remove an obstruction which exists in this portion of the canal. The waterway above the town of Monaghan therefore, is still impassable by barges during a portion of almost every summer, and in dry seasons the stoppage of the traffic is complete for considerable periods. Until this essential improvement has been carried out the Ulster Canal will not be able to reap the traffic which awaits it at the thriving towns through which it passes. It is a most important link in the northern navigation system—continuing the line of navigation from Moy on the Blackwater river to Lough Erne, near which lake it joins the River Finn.

Ballinamore and Ballyconnell Canal.

This navigation is, practically, a series of lakes joined by canal cuts. As designed it is useless except for barges drawn by steam power; the intermittent series of small lakes through which it is conducted, making horse haulage impossible. As a connecting link with Lough Erne it might, however, be available whenever the improved industrial conditions of the country warrants steam traction; in which case the Grand Canal Company's boats might avail of it, their present terminus being Carrick-on-Shannon. It unites Lough Erne to the Shannon at the town of Leitrim. Its total length is 38 miles 46 chains. The size of the locks is 82 feet long by 16 feet 6 inches broad, with a depth of water on the cills when originally constructed of 5 feet 6 inches. The canal was made by the Board of Works for the purpose both of navigation and drainage between 1846 and 1859, at a cost of £228,652, of which sum £30,000 has been repaid by the adjoining counties. The remainder, £198,652, has been a free grant from the public exchequer.

The works were handed over to two bodies of trustees —navigation and drainage trustees—in 1860, both bodies having taxing powers for maintenance purposes. No railway runs parallel to this canal, nor competes directly with it for traffic, but there is direct railway communication from Dublin to Carrick-on-Shannon, at the western end, and from Dublin, Belfast, and Dundalk, to Belturbet Junction and Clones, not far from the eastern end. Lord Monck's Commission reported as follows on the state of this navigation in 1882 :—

"The canal is now out of repair and quite unnavigable. The receipts for five years ending in 1880 were '*nil*.' The annual expenditure on navigation account, apparently for lock-keepers' wages, was about '£80.' It is alleged that the navigation was originally 'badly designed, badly made, and passed over to the trustees in an unfit state.' Evidence has been given to us that the navigation works were, up to 1865, kept by the trustees 'in the order in which they received them ;' but that since that time, there being no trade, nothing has been done to keep them in repair. The canal was navigable, and no more, when given up by the Commissioners of Public Works, and there being no traffic worth mentioning upon it, was allowed to go from bad to worse until it has reached its present condition of absolute uselessness as a navigation. We have been informed by competent engineers that by the expenditure of £7,000 or £8,000, the canal could again be made navigable, but when it *was* navigable no use was made of it, and the trustees advertised in vain for persons to establish boats upon it. In 1865, whilst the canal was still in working order, the Grand Jury of the County of Cavan

> 'Expressed their unanimous sense of the utter inutility of this navigation, and earnestly hoped that the Commissioners of Public Works would not continue to exercise the power vested in them of obliging the trustees to maintain (save so far as might be necessary for drainage purposes) any of the works connected with this navigation, which had been in operation for some years, and had been fully proved to be totally valueless to the county which had been so heavily taxed for it.'

The evidence submitted to us goes to show that the restoration of the navigation would be of little benefit to the public, that there would be no profitable traffic upon it, and, further, that there would be a great disinclination on the part of the local tax-payers to support it. The canal has, however, a completely different aspect when viewed as a drainage work. The evidence is unanimous that, for drainage purposes it is most valuable, and that it is of great importance that it should be maintained as an arterial drain."

The Shannon Navigation.

The River Shannon rises in Cuilca Mountain in Cavan county, passes southward through Leitrim, and thence between Connaught and Leinster and Connaught and Munster to Limerick, forming in its course several large lakes, the principal of which are Loughs Allen, Ree, and Derg, and turning westward, discharges itself into the Atlantic through a large estuary between the counties of Clare and Kerry, a distance of 254 miles Previous to 1831 the Shannon Navigation appears to have been under the control of three distinct bodies, viz., the Lower Shannon under the Limerick Navigation Company ; the Middle Shannon under the Grand Canal Company; and the Upper Shannon under the Directors of Inland Navigation. On the powers of the Directors of Inland Navigation being, by the Act of that year (1 & 2 W. IV. c. 33), transferred to the Board of Public Works, the Upper Shannon was handed over to the Board. The navigation appears to have remained under a divided control, that is, partly in public hands, and partly in private hands, till 1839. It was taken over by the Board of Works in 1850 (see footnote, p. 111).

The navigation is open for traffic throughout its entire length, between the northern extremity of Lough Allen and Limerick, a distance of 143 miles in a direct course; but by adding the Boyle branch of nine miles and the Strokestown branch of six miles, a total length of river and canal navigation of 158 miles is now open; of which 129 miles, viz., from Killaloe to Leitrim, including the two branches above mentioned, are suited to the navigation of large steamers. In the main river of 115 miles the entire fall amounts only to 35 feet, which has been overcome by the erection of five locks. This important navigation, which occupies nearly a central position between the east and west coasts of Ireland, is connected with Dublin by means of the Grand and Royal Canals. The cost of the Shannon works was defrayed—£272,789 from local taxes, and £410,523 from general taxes. The amount of rents, tolls, &c., received in the year ended 31st March, 1877, was £5,372, and the expenditure amounted to £5,362, including £3,175 in works.

The Grand Canal.

The Grand Canal Company plies over the most extensive waterway in the United Kingdom, owning a canal system reaching from Dublin southwards to New Ross in Wexford, and westwards to the Shannon. From thence its traffic is carried over the latter navigation to Limerick in the south-west, and northwards to Carrick-on-Shannon in Leitrim. Nearly all the freight is carried in the Company's own boats, and though directly competing with Railways over almost the whole distance, yet it has proved that with good management canals are capable of yielding fair profits in Ireland even through districts devoid for the most part of manufacturing centres or mineral products.

The Grand Canal proceeds from the south of Dublin westward to the Shannon at Shannon Harbour, and thence on the other side of the Shannon to Ballinasloe, with branches to the Liffey, Robertstown, Blackwood Reservoir, Monasterevan, St. James's Well, Athy, Mountmellick, Edenderry, and Kilbeggan. The summit level 279 feet above sea-level, and 164 feet above the Shannon at Shannon Harbour, is near Robertstown, about 25 miles from Dublin. The Grand Canal was commenced by the Commissioners of Inland Navigation, who received grants of public money, between 1753 and 1772, to the amount of £70,496. In the latter year the completion of the canal was transferred to a company. Between 1772 and 1800 the company received grants to the extent of £83,776, in addition to £18,231 to secure the completion of the Ringsend Docks. In 1798 the company obtained a loan of £27,692 of public money on the opening of the Athy branch of the canal, and a further grant of £138,461 was made as recommended by Government and approved of by a Committee of the House of Commons in 1813, on the terms that the company should raise £46,154, to be applied, along with the £138,461, in payment of their debts. The extension of the canal from the Shannon to Ballinasloe and the Mountmellick and Kilbeggan branches were subsequently made for the purpose of giving employment to the poor, and £98,524 was advanced to facilitate their execution. The extensions were opened in 1830. In 1844 the repayment of this sum was commuted by statute for £10,000. By an Act of 1848 the original company, called "the Undertakers of the Grand Canal," was reconstituted under the name of the "Grand Canal Company." The passenger traffic on the canal ceased on the opening of the railway system, but the company received a remission of its debt to the Government to the extent of £88,524. The total capital expenditure on the canal is put down at £1,137,680, out of which public grants amounted to £321,674. The profile of the Grand Canal at the Dublin terminus is wanting in boldness, ascending by a gradual flight of 19 locks to a level of 211 feet above the sea at low water in 9 miles. Near Robertstown, in the county Kildare, about 25 miles from Dublin, it attains the summit level of 278 feet, and thence the southward branch to the Barrow bifurcates. The Shannon line skirting the Bog of Allen continues for 25½ miles at the same level, only interrupted by one lock having a lift of 9 feet past Phillipstown towards Tullamore. Then passing again through portions of the Bog of Allen it reaches the River Shannon at Shannon Harbour, 82 miles from the River Liffey, where is an extensive establishment of the Company, consisting of a large range of stores and a hotel. This place, together with Tullamore, were once the centres of great activity, both in the transmission of grain, &c. to Dublin from the counties of Galway and Tipperary, and as chief stations for the passenger boats, which were for many years the chief nd favourite means of communication between the central parts of Ireland and the metropolis before the introduction of well-appointed stage coaches about 1810 when the service was reduced to six boats daily. The rate of 8 miles an hour, including delays at locks, was attained by narrow fly boats, which, drawn by four horses at a gallop, plied only by day. A slower passenger and parcel boat travelled night and day, at a moderate rate of speed, and the Company maintained five hotels for the accommodation of the travellers. After the introduction of steamboats the passenger service was extended to Limerick. At Shannon Harbour the trade boats of the Company tranship into steamers which ply northwards to Athlone through Lough Ree to Carrick-on-Shannon, and southwards by Banagher and Portumna through Lough Derg to Killaloe, and thence by the Limerick Canal to Limerick.

The southern branch of the canal, starting, as before mentioned, from the summit level, reaches the Barrow at Athy through two double and ten single locks. Thence to Bagnalstown on the Barrow Navigation by flat-bottomed barges, carrying a maximum load of 40 tons in winter, and less in summer, in consequence of the condition of the navigation channel of the Barrow. The Grand Canal is peculiar in having been carried at various places through bog for a total distance of 28 miles. The calculation that by so doing embankments would be avoided proved futile, inasmuch as the vicinity of the canal stimulated the trade in peat fuel, and the bog has been cut away in several places to a considerable depth on each side, necessitating considerable outlay in maintenance. The average cost of maintenance was estimated in 1878 (by the Commission on the Board of Works, Ireland),* at £16,186 per annum, and the annual receipts at an average of £24,033, exceeding, therefore, the outgoings by one-third. The canal in 1889 paid the shareholders £2 per cent. interest per annum, in 1890, £1 10*s.*, and in 1891 and 1892, £2. In March, 1894, the dividend was 3½ per cent., in 1895 and 1896, £3 per cent., in 1897, 3½ per cent., in 1898 and 1899, £4 per cent., in 1900, £3 10*s.* per cent., and in 1901, £3 per cent. In 1891 the Capital authorised and created by the Company amounted to £665,938 14*s.* 6*d.* In 1894 the Company was authorised by the Grand Canal Act, 1894, to purchase the Barrow Navigation Company whose system extended from a junction with the Grand Canal Company at Athy to the tidal way at St. Mullins, passing through Carlow, Milford, Leighlinbridge, Bagnalstown, and Graiguenamanagh and going on to New Ross and Waterford. The purchase was completed on the 1st July, 1894, at a cost of £30,000. The conversion of the Company's Capital authorised by the Act came into operation on 1st January, 1895. The Stock was converted into £10 shares, one-half of which (£332,950) are preference shares bearing 3 per cent. interest and the remainder (£332,950) ordinary shares which are entitled to all the profits after the preference shares receive 3 per cent. The Act also authorised the issue of Debenture Stock to an extent not exceeding £85,000, of which £36,000 has now been issued.

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* Report [C.—2060], 1878, p. xliv.

The Barrow Navigation.

The Barrow navigation connects the Athy branch of the Grand Canal with the tidal part of the River Barrow below St. Mullin's. The length of the Barrow from Athy to the "Scars" at St. Mullin's, is 43 miles, and has a total fall of 169 feet. The river between Athy and St. Mullin's lock is canalized for its entire length. There are 23 locks and 22 weirs, the level at Cloghrenan lock (2 miles below

Carlow) being maintained in the canal (which is about 60 chains in length) by the natural fall in the river for that distance.

An excellent account of this navigation was given by Mr. M. B. Mullins, A.M., in his address as President of the Institution of Civil Engineers of Ireland in the year 1859 which is worth quoting as illustrating the history of this waterway.

"The river forms the course of this navigation, except in a few instances where short deviations are made. It extends from Athy, in the county of Kildare to the tide water below the rock called the 'Scars,' at St. Mullin's, in the county of Carlow—a distance of 34 miles, nearly 5 miles of which are lateral cuts, The works were commenced in 1759, according to the designs of Mr. Thomas Omer, who proposed to make them suitable for vessels of 70 tons at all seasons, the river in its then state not having been navigable at certain times of the year by vessels carrying more than 2 or 3 tons. Seven locks and the cuts leading to and from them had been completed up to 1790 under the immediate inspection of Mr. John Semple, as Deputy Engineer. In the above-mentioned year, £22,500 having been previously spent under the Navigation Board, the Company was incorporated, and Mr. William Chapman was appointed to direct the works. The proposal made by the Company to Parliament, was to render the river navigable for boats of 15 tons in summer and 30 tons in winter, with towing-paths for the whole length, and to expend for that purpose £40,000 of their own money, on receiving £20,000 from the public purse; but whatever success might have attended the first proposal it was only partially proceeded with, for during the progress of the works the Company were induced to enlarge their project for the purpose of enabling boats from Youghal and Dungarvan to pass through the River Barrow and Grand Canal to Dublin without transhipping, and also take in coal vessels from British ports. With that view 24 new locks were designed, 80 feet long and 16 feet wide, with 5 feet water on the cills to admit boats of 80 tons burden. Of these, 10 were built, and 4 of the original locks, of various sizes and of bad construction, were taken down and reconstructed on the modified plan. However, on the withdrawal of the canal bounties on produce carried to Dublin, the progress of the enlarged scheme was stopped, but only for a time, no importance having been apparently attached to the fact that the locks of the Grand Canal, which were not uniform in size, are in no instance more than 70 feet in length, so that Dublin could not be reached by 80-ton boats without transhipping.

"After having expended on the several works £62,881, including the grant of £20,000, the navigation being still incomplete on the enlarged scale proposed, the Company applied for aid to the Directors-General who agreed to give them £20,000 on condition of their reducing the tolls, and to give a further sum of £27,500, a moiety of £55,000, the estimated cost of completing the navigation, with the necessary locks and lateral cuts, weirs, towing paths, &c., on the enlarged scale before specified. Those several amounts, together with a sum of £11,620, the half of which was likewise contributed by the Directors-General, had been expended on the works up to February, 1812, when a survey was made of their then state, and an estimate of the cost of completion prepared amounting to £66,000.

"The outlay from 1803 to 1812, including £78,891 granted by the Directors-General, was £149,501 ; if to this we add the sum of £23,500 expended by the Board of Navigation previous to the incorporation of the Company, and the sum of £66,000 the amount of the estimate to finish made in 1812, we shall get a total of £239,001, equal to £7,029 8*s*. 9*d*. per mile, at a rate of lockage in that distance of only 5 feet per mile, a considerable portion of which would be absorbed in the declination sufficient to give impetus to the discharge of the waters of the river and of its tributaries.

"The profits in 1812, according to the report submitted to Parliament were £2,589 or £76 per mile per annum, not including interest on capital subscribed by individuals, or on grants obtained from the Government; but had the peculiarly favourable lie of the country for a canal the whole way been taken advantage of, the proprietors could not have failed to obtain a far different result, as well by the economy of construction and maintenance as by the general improvement of the surrounding districts, seeing that the Barrow Navigation passes through a country of great natural fertility, and high cultivation; that it meets at its outfall the rivers Nore and Suir by which it communicates with the ports of New Ross and Waterford, and that the towns of Carrick-on-Suir, Clonmel, Ennisteague, and Thomastown, are also accessible to it, from one extremity, while the port of Dublin is open to its craft at the other; time alone having been necessary for the development of highly remunerative traffic, on a line so favourably circumstanced if cheaply and judiciously constructed. Boats cannot load more than two-thirds of their tonnage in summer." This waterway now belongs to the Grand Canal Company, having been acquired by purchase in the year 1892.

The Newry Navigation.

This navigation is carried from Warrenpoint to Newry by the ship canal which admits vessels drawing 15 feet of water; thence northward by canal to Portadown; 16½ miles above it joins the Lower Bann, in the bed of which river it is continued to Lough Neagh. The summit level is 76 feet, and 28 above

Lough Neagh. The Newry Navigation was purchased in 1901, by the Newry Harbour and Navigation Trust. In 1881, the shares of the Newry Navigation Company were worth £55; in 1900 they had fallen as low as £20, and at something like the last figure they were purchased.

Tyrone Navigation.

This is a short navigation, extending from Coal Island to the river Blackwater, near Lough Neagh. The works were executed under 40 Geo. III., c, 51, in the early part of the century, out of public funds, to the amount of £25,813, by the Directors-General of Inland Navigation, and when the powers of those Directors were transferred to the Board of Works, under 1 & 2 W. IV., c. 33, in 1831, this navigation passed into the hands of the Board of Works, in whom it has since been vested.

Boyne Navigation.

This navigation extends from a little above Slane to Drogheda. A sum of £75,000 was expended on the works prior to 1789, and a further outlay of £85,000 subsequently, by the Directors-General of Inland Navigation. Over £30,000 was subscribed for privately, which brought the total cost of the navigation up to about £190,000. It passed into the hands of the Board of Works, in consequence of the transfer to them in 1831 of the powers of the Directors-General.

Lough Corrib.

This was one of the navigations undertaken by the Board of Works, under 5 and 6 Vic., c. 89, in connection with arterial drainage wroks, between 1848 and 1589. The cost of the works was intended to be divided between the Government and the district; but, in consequence of an integral part of the scheme, which was to connect Lough Corrib with Lough Mask, being found impracticable owing to the subterraneous limestone caverns, the whole of the expense (£102,289), with the exception of £14,883 repaid by the counties, fell on public funds. The works were handed over to trustees, pursuant to 19 and 20 Vic., c. 62. In 1874 powers were given to the trustees, by the Act 37 and 38 Vic., c. 71, to dispose of the property with the consent of the Grand Jury.

Maigue Navigation.

This navigation extends from Adare, county Limerick, to the River Shannon. The works are about eight miles in length, and they were executed at a cost of between £2,000 and £3,000 in 1715, under the first Act for promoting Inland Navigation in Ireland. After being vested first in the Commissioners, and then in the Directors-General of Inland Navigation, these works were transferred in 1831 to the Board of Works.

(*d.*) *The present position of Irish Canals.*

The history of Irish inland navigation is not exhilarating reading. Conceived on broad national lines, the system of artificial waterways in this country has been executed in a singularly spasmodic and haphazard fashion. Control and responsibility for its extension and maintenance have been, from the start, so separated and shifted from one authority to another that no policy of continuous development was possible. Again, opinion, even expert opinion, hesitated frequently between the claims of navigation and drainage—wherever their interests were not coincident—and hesitation led to inaction. Since the railway era, the question of inland navigation had practically been neglected, in these countries, till within the last two decades or so.

In this inadequate survey of a very interesting but a very complex subject, I have endeavoured to suggest some of the classes of consideration—mainly economic—that would have to be kept in view in a general consideration of the transit possibilities of our waterways.

The present position of the Irish canals and river navigations can be seen from the Board of Trade Tables which I annex to these remarks, and also, in regard to some of the chief navigations, from a few summary statements which I have had specially prepared for this Report. It would be clearly invidious to do more than publish the details in regard to individual companies, and I shall not, therefore, make any further comments on the affairs of separate canals or navigations.

TABLE XIV.—SUMMARY of LENGTH OF NAVIGATION, CAPITAL, TRAFFIC, REVENUE, KINGDOM for the Years

—		Length of Navigation.		Total Share and Loan Capital authorised.	Total Capital paid up and raised from all Sources.	Traffic Conveyed.	Total Revenue.
CANALS AND NAVIGATIONS NOT BELONGING TO RAILWAY COMPANIES.		m.	ch.	£	£	Tons.	£
England and Wales, ...	1888,	2,025	67	27,511,026	20,959,820	27,715,875¼	1,439,343
	1898,	2,208	2	36,917,834½	35,091,403½	32,513,800½	1,895,506
Scotland, ...	1888,	69	40	-	1,254,047	00,744	12,011
	1898,	69	40	-	1,254,047	158,739	14,040
Ireland, ...	1888,	513	38	1,007,688	2,071,308	489,194	89,369
	1898,	490	43	1,050,635	1,583,820	676,034	108,148
Total, United Kingdom, ...	1888,	2,608	05	28,519,614	*24,285,175	28,274,813¼	1,540,723
	1898,	2,768	5	37,968,469½	*37,920,270½	†33,348,573½	2,018,294
CANALS AND NAVIGATIONS BELONGING TO RAILWAY COMPANIES.							
England and Wales, ...	1888,	1,024	25	In most instances the capital has not been kept separate by the Railway Companies, so that totals cannot be given.		6,609,304	437,080
	1898,	959	14½			4,913,085½	331,305
Scotland, ...	1888,	84	25			1,386,617	57,178
	1898,	83	61			1,064,505	52,369
Ireland, ...	1888	96	0			30,386	6,495
	1898,	95	69			32,140¼	6,566
Total, United Kingdom, ...	1888,	1,204	50	-	-	8,026,307	500,753
	1898,	1,138	64½	-	-	0,009,820¾	390,240
GRAND TOTAL, ...	1888,	3,813	35	-	-	36,301,120¼	2,041,470
	1898,	3,906	69½	-	-	†30,358,394½	2,408,534

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* The total includes—{1888, £4,839,572 / 1898, 4,597,521} Capital provided otherwise than by Stock and Share Capital and

† Not including 1,142,477 tons of Traffic passing

TABLE XV.—Showing, for the Year 1898, the AMOUNTS of ORDINARY and PREFERENTIAL STOCK and SHARE CAPITAL and the AMOUNTS of LOANS and DEBENTURE STOCK, classed according to the Rate per Cent. of DIVIDEND PAID and the Rate per Cent. of INTEREST at which BORROWED, in respect of CANALS and NAVIGATIONS in IRELAND not belonging to RAILWAY COMPANIES.

Rate per Cent. of Dividend or Interest Paid,	ORDINARY.		PREFERENTIAL.		LOANS.		DEBENTURE STOCK.	
	Amount.	Rate per Cent. of Total.	Amount.	Rate per Cent. of Total.	Amount.	Rate per Cent. of Total.	Amount.	Rate per Cent. of Total.
No Dividend or Interest paid, ..	£ 82,898	17·03	£ -	-	£ -	-	£ -	-
Dividends and Interest paid—								
Not exceeding 1 per cent., ...	66,000	13·55	-	-	-	-	-	-
Exceeding 1 per cent. and not exceeding 2 per cent.	-	-	-	-	-	-	-	-
Exceeding 2 per cent. and not exceeding 3 per cent.,	-	-	332,950	100·0	-	-	38,600	33·52
Exceeding 3 per cent. and not exceeding 4 per cent.	332,950	68·37	-	-	10,002	100·0	72,000	65·94
Exceeding 4 per cent. and not exceeding 5 per cent.	5,120	1·05	-	-	-	-	585	0·54
At 5 per cent. or upwards, ...	-	-	-	-	-	-	-	-
TOTAL, ...	486,968	100·0	332,950	100·0	10,002	100·0	109,185	100·0

Expenditure, and **Net Pro**f**it** for the Canals and Navigations of the **United** 1888 and 1898.

Proportion of Revenue per Mile of Navigation.	Total Expenditure.	Proportion of Expenditure per Mile of Navigation.	Proportion of Expenditure to Receipts.	Net Profit.	Proportion of Net Profit per Mile of Navigation.	Remarks.
£	£	£	Per Cent.	£	£	
710	861,068	425	59·82	578,275	285	In any comparison with the year 1888 it should be borne in mind that the Returns for 1898 were more complete, and included information for a few canals and navigations in respect of which Returns were not obtained for 1888. The Returns for 1898 also include information of the traffic conveyed on the Manchester Ship Canal, which was opened in 1894, and on the Gloucester and Berkeley Ship Canal.
858	1,322,201	599	69·75	573,305	259	
173	16,086	231	133·92	*Loss*, 4,075	*Loss*, 58	
211	13,316	192	90·95	1,324	19	
174	71,541	139	80·05	17,828	34	
220	84,517	172	78·15	23,631	48	
590	948,695	363	61·57	592,028	227	
729	1,420,034	513	70·36	598,260	216	
426	335,503	327	76·76	101,577	99	The mileage of canals belonging to Railway Companies has decreased, owing to the transfer to the Sheffield and South Yorkshire Navigation Company of certain canals which belonged to the Great Central Railway Company.
345	309,025	322	93·27	22,280	23	
678	26,599	315	46·51	30,579	302	
625	28,830	344	55·05	23,539	281	
67	4,458	46	68·60	2,039	21	
68	6,148	64	93·63	418	4	
415	366,558	304	73·20	134,196	111	
342	344,003	302	88·15	46,237	40	
535	1,315,253	344	64·42	726,223	190	
016	1,764,037	451	73·24	644,497	165	

by Loans and Debenture Stock. In the majority of instances the amount has been provided out of Revenue. free of toll on Manchester Ship Canal.

Table XVI.—Showing in respect of each Canal or Navigation in Ireland the Length of Navigation, the Number of Locks and Tunnels, and the Maximum Size of Boats that can use the Canal or Navigation.

Name of Canal or Navigation.	Length of Navigation.		Number of Locks.	Number of Tunnels.	Maximum Size of Boats that can use Canal or Navigation.							
					Length.		Width.		Draught.		Headway.	
	m.	ch.			ft.	in.	ft.	in.	ft.	in.	ft.	in.
Boyne, ...	19	0	20	-	70	0	14	3	4	5	7	0
Grand, ... —	209	18	86	-	61 68	0 0	13 13	6 4	4 4	6 0	9 8	0 0
Lagan, Ulster, and Coalisland Canals—												
Lagan, ...	26	20	27	-	62	0	14	6	5	6	5	3
Ulster, ...	46	0	26	-	52	0	11	6	5	0	8	0
Coalisland, ...	4	40	7	-	62	0	14	6	5	0	6	0
Lower Bann, ...	32	0	5	-	110	0	18	6	6	0	-	
Nowry, ...	18	0	13	-	54	5	15	1	5	2	9	3
Royal, ...	95	69	45	-	70	0	13	1	4	6	10	0
Shannon, ...	131	40	20	-	73 100 66	0 0 0	14 29 13	9 0 0	4 6 4	10 0 6	12 15 11	0 6 6
Strabane, ...	4	5	2	-	70	0	16	5	5	0	-	
Total, Ireland, ...	586	32	252	-								

TABLE XVII.—RETURN in respect of the CANALS and NAVIGATIONS in IRELAND of Share and Loan Capital on the 31st December, 1898, specifying the Rate of Capital, and the Amount of Capital (if any) subscribed to other

(1.) Name of Canal or Navigation. (2.) Statutory or other Name of Proprietors, Trustees, &c., and address of Chief Office. (3.) List of Special Acts of Parliament relating to Canal or Navigation	AUTHORISED CAPITAL up to 31st December, 1898.			PAID UP STOCK AND SHARE CAPITAL on 31st December, 1898.					
	By Stock or Shares.	By Loans and Debenture Stock.	Total.	Ordinary.	Rate of Dividend paid.	Preferential.	Preferential rate of Dividend.	Preferential rate of Dividend paid.	Total paid up Stock and Share Capital on 31st December, 1898.
	£	£	£	£	Per cent.	£	Per cent.	Per cent.	£
BOYNE NAVIGATION.									
(1.) Boyne Navigation, ... (2.) Boyne Navigation Company, Limited, Merchants Quay, Drogheda (3.) Boyne Navigation Transfer Act, 1896, 59 & 60 Vict., c. 96, and the Canal Rates, Tolls, and Charges, No. 11 (Grand Canal) Order Confirmation Act 1894, 57 & 58 Vict., c. 203.	5,000	-	5,000	2,749	-	-	-	-	2,749
GRAND CANAL.									
(1.) Grand Canal, ... (2.) The Grand Canal Company, James's Street Harbour, Dublin. (3.) 11 & 12 Geo. III., c. 31. 29 Geo. III., c. 1. 35 Geo. III., c. 1. 53 Geo. III., c. 143. 11 & 12 Vict., c. 124. 57 Vict. c. 26. The Canal Rates, Tolls and Charges, No. 11 (Grand Canal) Order Confirmation Act, 1894, 57 & 58 Vict., c. 203.	665,900	100,000	765,900	332,950	4	332,950	3	3	665,900
LAGAN CANAL.									
(1.) Lagan, Ulster and Coalisland Canals. (2.) Lagan Navigation Company, 19, Donegal Quay, Belfast. (3.) 27 Geo. II., 1753, c. 3. 3 Geo. III., 1763, c. 6. 11 & 12 Geo. III., 1771-2, c. 26. 13 & 14 Geo. III., 1773-4, c. 12. 19 & 20 Geo. III., 1779-80, c. 32. 54 Geo. III., 1814, c. 231. 6 & 7 Vict., 1843, c. 104. 36 Vict., 1873, c. 65. 51 & 52 Vict., 1888, c. 137. The Canal Tolls and Charges, No. 10 (Lagan, &c., Canals) Order Confirmation Act, 1894, 57 & 58 Vict., c. 206.	80,150	32,585	112,735	80,149	-	-	-	-	80,149
LOWER BANN NAVIGATION.									
(1.) Lower Bann Navigation, ... (2.) The Trustees of the Lower Bann Navigation— Secretary, New Row, Coleraine. Superintendent, Artnagross, Kilrea. (3.) 5 & 6 Vict., c. 87. 19 & 20 Vict., c. 62. The Canal Tolls and Charges, No. 10 (Lagan, &c., Canals) Order Confirmation Act, 1894, 57 & 58 Vict., c. 206.	The Navigation is governed by ten Trustees, and the amounts required to maintain the Navigation are granted by the Grand Juries of the Counties of Antrim and Londonderry, and an Account is rendered to the Grand Juries every half-year showing how the amounts have been disposed of. The sum of £800 was provided in 1898, and since 1860, the total amount provided has been £32,860.								

No. 1.—CAPITAL, &c

the authorised SHARE and LOAN CAPITAL, and the Sums received in respect of such per Cent. of the Dividends or Interest paid for the Year 1898, on each Class Undertakings.

CAPITAL RAISED BY LOANS AND DEBENTURE STOCK on 31st December, 1898.					Capital otherwise provided and expended up to 31st December, 1898.	Total Capital paid up and Capital raised by Loans and Debenture Stock or otherwise on 31st December, 1898.	Subscriptions to other Companies.	Total Capital expended by present Proprietors.	Capital expended during year 1898.	REMARKS.
Loans (exclusive of Debenture Stock).	Rate of Interest paid.	Debenture Stock.	Rate of Interest paid.	Total raised by Loans and by Debenture Stock on 31st December, 1898.						
£	Per cent.	£	Per cent.	£	£	£	£	£	£	
-	-	-	-	-	-	2,749	-	2,749	128	A Government grant of £2,294 5s. 5d. was also spent on renewing canal, &c., in the previous four years.
-	-	36,600	3	36,600	-	702,500		702,500	1,196	
10,002	4	585	5	10,587	-	90,736	-	96,120*	-	* This sum is exclusive of a Government Grant of £3,500 for Ulster Canal repairs.
-	-	-	-	-	-	-	-	-	-	

TABLE XVII.—RETURN in respect of the CANALS and

(1.) Name of Canal or Navigation. (2.) Statutory or other Name of Proprietors, Trustees, &c., and address of Chief Office. (3.) List of Special Acts of Parliament relating to Canal or Navigation.	AUTHORISED CAPITAL up to 31st December, 1898.			PAID UP STOCK AND SHARE CAPITAL on 31st December, 1898.					
	By Stock or Shares.	By Loans and Debenture Stock.	Total.	Ordinary.	Rate of Dividend paid.	Preferential.	Preferential rate of Dividend.	Preferential rate of Dividend paid.	Total paid up Stock and Share Capital on 31st December, 1898.
NEWRY NAVIGATION.	£	£	£	£	Per cent.	£	Per cent.	Per cent.	£
(1.) Newry Navigation, ... (2.) Proprietors of the Newry Navigation, Navigation Office, Newry. (3.) 10 Geo. IV., 1829, c. 126. 6 Wm. IV., 1836, c. 71. 4 & 5 Vict., 1841, c. 56. 11 & 12 Vict., 1848, c. 96. 47 & 48 Vict., 1884, c. 138. 60 & 61 Vict., 1897, c. 176. The Canal Tolls and Charges No. 10 (Lagan, &c., Canals) Order Confirmation Act, 1894, 57 and 56 Vict., c. 206.	80,000	80,000	160,000	66,000	1	-	-	-	66,000
MIDLAND GREAT WESTERN RAILWAY OF IRELAND COMPANY.									
(1.) Royal Canal, ... (2.) Midland Great Western Railway of Ireland Company, Dublin. (3.) 8 & 9 Vict., c. 119. 40 & 41 Vict., c. 139. The Canal Tolls and Charges No. 10 (Lagan, &c., Canals) Order Confirmation Act, 1894, 57 and 58 Vict., c. 206.	The Royal Canal was purchased under the Midland Great Western Railway of Ireland Act, 8 & 9 Vict., c. 119, 21 July, 1845, for £298,059.								
SHANNON AND MAIGUE NAVIGATIONS.									
(1.) Shannon Navigation, ... (2.) Commissioners of Public Works, Office of Public Works, Dublin. (3.) 2 Geo. I., c. 12. 29 Geo. III., c. 33. 40 Geo. III., c. 51. 53 Geo. III., c. 144. 2 & 3 Vict., c. 61. 9 & 10 Vict., c. 86. 57 and 58 Vict., c. 206. The Canal Tolls and Charges No. 10 (Lagan, &c., Canals) Order Confirmation Act, 1894, 57 and 58 Vict., c. 206.	-	-	-	-	-	-	-	-	-
(1.) Maigue Navigation, ... (2.) Commissioners of Public Works, Office of Public Works, Dublin. (3.) 1 & 2 Wm. IV., c. 33, s. 105.	-	-	-	-	-	-	-	-	-
STRABANE CANAL.									
(1.) Strabane Canal, ... (2.) Strabane Canal Company (Limited). (3.) 31 Geo. III., c. 42. The Canal Rates, Tolls, and Charges (Strabane Canal) Order Confirmation Act, 1896, 59 & 60 Vict., c. 78.	7,000	-	7,000	5,120	5	-	-	-	5,120
TOTAL IRELAND,† ...	838,050	212,585	1,050,635	486,968	-	332,950	-	-	819,918

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† It will be observed that these totals are not complete, as in the case of some Canals and Navigations capital position of the present Proprietors at 31st December, 1898, and does not in some cases, owing to No total is given of the column as to capital expended the information being wanting or defective

No. 1.—CAPITAL, &c.

NAVIGATIONS in IRELAND of the authorised SHARE and LOAN CAPITAL, &c.

CAPITAL RAISED BY LOANS AND DEBENTURE STOCK on 31st December, 1898.					Capital otherwise provided and expended up to 31st December, 1898.	Total Capital paid up and Capital raised by Loans and Debenture Stock or otherwise on 31st December, 1898.	Subscriptions to other Companies.	Total Capital expended by present Proprietors.	Capital expended during year 1898.	REMARKS.
Loans (exclusive of Debenture Stock).	Rate of Interest paid.	Debenture Stock.	Rate of Interest paid.	Total raised by Loans and by Debenture Stock on 31st December, 1898.						
£	Per cent.	£	Per cent.	£	£	£	£	£	£	
-	-	72,000	4	72,000	-	138,000	-	138,000	-	Both Harbour and Canal. The Return is for year ended 5th April, 1899.
-	-	-	-	-	-	-	-	Purchase money, £298,059, Expended by Railway Company on works on the Canal, including that expended under 40 & 41 Vict., c. 139, £109,313. £407,372	-	
-	-	-	-	-	640,577	640,577	-	640,577	*1,157	*£445 for new works was met out of Parliamentary Vote. In addition, £712 was spent for new works out of revenue.
-	-	-	-	-	4,147	4,147	-	4,147	-	The revenue for ordinary maintenance being insufficient, £38 was paid out of Parliamentary Vote.
-	-	-	-	-	-	5,120	-	5,120	-	
10,002	-	109,185	-	119,187	644,724	1,583,829	-	1,936,585	2,481	

little or no information as regards capital can be given. The information given in each case represents the change of ownership or re-arrangement of capital, &c., include the original capital paid up and expended. In many cases.

TABLE XVIII.—RETURN in respect of the CANALS and NAVIGATIONS in IRELAND, of TRACTION employed during the

NAME OF CANAL OR NAVIGATION.	TRAFFIC CONVEYED.*					REVENUE.			
	Local Traffic.	Through Traffic.							
	Loaded and discharged on the Canal.	Loaded but not discharged on the Canal.	Discharged but not loaded on the Canal.	Not loaded or discharged on the Canal.	Total.	From Tolls.	From freight as carriers	From other sources stating chief sources	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	£	£	£	£
	Conveyed by Company.								
BOYNE NAVIGATION, ...	-	408	1,864	-	2,272	158	368	Rents, &c. 10	536
	Conveyed by Bye-traders.								
	51	439	2,298	-	2,788				
	51	847	4,162		5,060				
	Conveyed by Company.								
GRAND CANAL, ...	129,555	52,787	29,666	9,977	221,985	From Tolls and Dock Dues, 8,260	72,943	Rents and Sundries, 7,834	89,037
	Conveyed by Bye-traders.								
	87,017	286	-	-	87,303				
	216,572	53,073	29,660	9,977	309,288				
LAGAN, ULSTER, AND COALISLAND CANALS.									
Lagan Canal, ...	-	593	74,270	96,921	171,784	5,665	·	Towages, 1,397 Rents, 85 Sundries, 3	7,150
Ulster, ...	-	1,712	15,468	-	17,180	744	-	Rents, 118 Horse-hauling, 572	1,434
Coalisland Canal, ...	-	5,993	25,936	-	31,929	612	-	Rents, 40	652
LOWER BANN NAVIGATION.	-	-	60	-	60	42	-	-	42

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* In cases where Canal Companies act as carriers of traffic, the traffic so conveyed is stated separately from the traffic conveyed by Bye-traders.

No. 2.—TRAFFIC, &c.

showing the AMOUNT of TRAFFIC, the REVENUE and EXPENDITURE, and the METHOD
Year ended 31st December, 1898.

WORKING EXPENDITURE.				Net Revenue	Method of Traction employed.	REMARKS (including a statement of the principal descriptions of Traffic conveyed, arranged in order of importance).
Management and maintenance of Canal or Navigation (stated separately).	Transit expenses (*i.e.*, expenses in acting as carriers of Traffic).	Other expenditure (stating chief heads, and if possible the amount (if any) expended out of Revenue on new works and improvements).	Total.			
£	£	£	£	£		
Management, 40 Maintenance, 166	161	198	565	*Loss*, 29	Steam.	Coals, oats, and bacon, to Navan; oats and sundries from Navan; flour and meal from Navan to Slane.
Management, 3,348 Maintenance, 8,055	48,973	Rents and Taxes, 3,593 Incidentals, 920 Improvements, 535	65,424	23,613	Horse and steam haulage.	Grain, porter, coal, sundries, malt, flour, meal, timber, artificial manure, empties, bricks.
Management, 616 Maintenance, 1,951	-	Interest, Rents, Tug Account, &c., 2,147	4,714	2,136	Horses.	Coal, grain, sand, general goods, timber, &c.
Management, 262 Maintenance, 1,174	-	Horse Account. Interest, Taxes, &c., 1,166	2,602	*Loss*, 1,168	Horses.	Coal, grain, general goods, timber, sundries.
Management, 172 Maintenance, 103	-	27	402	250	Horses	Coal, grain, sand, general goods.
933	-	-	933	*Loss*, 891.	By poles and sail.	Coal.

TABLE XVIII.—RETURN in respect of the

NAME OF CANAL OR NAVIGATION.	TRAFFIC CONVEYED.*					REVENUE.			
	Local Traffic.	Through Traffic.							
	Loaded and discharged on the Canal.	Loaded but not discharged on the Canal.	Discharged but not loaded on the Canal.	Not loaded or discharged on the Canal.	Total.	From Tolls.	From freight as carriers	From other sources, stating chief sources.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.	£	£	£	£
NEWRY NAVIGATION, ...	27,656	1,564	3,341	-	32,561	698	-	-	698
MIDLAND GREAT WESTERN OF IRELAND RAILWAY COMPANY.									
Royal Canal, ...	15,864	1,631	14,464¾	180½	32,140¼	2,713	-	Dockage, 1,430 Rents, 2,271 Interest, 152	6,566
SHANNON AND MAIGUE NAVIGATIONS.									
Shannon Navigation,	25,818	15,590	42,233	47	83,688	2,819	-	Rents, &c. 2,863	5,682
Maigue Navigation, ...	-	-	606	-	606	4	-	-	4
	Conveyed by Company.								
STRABANE CANAL, ...	-	1,872	20,359	-	22,231	-	2,808	4	2,913
	Conveyed by Bye-traders.								
	-	-	1,647	-	1,647	41			
	-	1,872	22,006	-	23,878				
	Conveyed by Canal Companies.								
	129,555	56,067	51,889	9,977	246,488				
	Conveyed by Bye-traders.†								
	156,406	27,808	178,323¾	99,148½	461,686¼				
TOTAL, IRELAND. ...	285,961	82,875	230,212¾	109,125½	708,174¼	21,756	76,179	16,779	114,714

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* In cases where Canal Companies act as carriers of traffic, the traffic so conveyed is stated separately from the traffic conveyed by Bye-traders.

† "The term 'Bye-trader' means any person (other than the Company) who conveys or desires to convey merchandise over the Canal."

No. 2.—TRAFFIC, &c.

CANALS and NAVIGATIONS in IRELAND, &c.

WORKING EXPENDITURE.						
Management and maintenance of Canal or Navigation (stated separately).	Transit expenses (*i.e.*, expenses in acting as carriers of Traffic).	Other expenditure (stating chief heads, and if possible the amount (if any) expended out of Revenue on new works and improvements).	Total.	Net Revenue.	Method of Traction employed.	REMARKS (including a statement of the principal descriptions of Traffic conveyed, arranged in order of importance).
£	£	£				
Maintenance, 304 Management, 182	-	-	486	212	Horse hauling.	Coal, general cargo, bricks, sand, turf, grass, seed, timber, grain. The return is for year ended 5th April, 1899.
Management, 1,386 Maintenance, 3,843	-	919 Rates and Taxes.	6,148	418	Horse.	Groceries, drink, ironware, grain, flour. meal, timber, coal, sand, gravel, potatoes, bricks, manure.
Management, 1,696 Maintenance, 3,482		On a/c of purchase of Steamer. 455 * Athlone Lock House. 257 Repayment of Loan for Clare Castle Pier. 395 Law Costs, &c., ... 451 * New works.	6,736	*Deficit*, 1,054	Steam and horse haulage.	Porter (about 25 per cent. of all traffic) empties, flour breadstuffs, grain, sundries and general, timber, coal, manure, petroleum, sugar.
42	-	-	42	*Deficit*, 38	Sailing boats.	Turf. There are private quays on the navigation, but the tonnage given refers merely to the quay under the control of the Commissioners.
Management, 320 Maintenance, 50	1,738	Rent, ... 300 Repairs to Lighters, 205	2,613	300	Steam and horse.	Grain, coal, timber, manure (artificial), feeding stuffs, slates, cement, groceries.
				Profit, 31,229 *Loss*, 3,180		
28.225	50.872	11,568	90,665	Net Profit, 28,049		

TABLE XIX.—RETURN in respect of the CANALS and NAVIGATIONS in IRELAND, Tunnels, and Reservoirs, the Source of the Water Supply, and the Maximum

* A pair of locks shall mean two locks side by side, and a flight

NAME OF CANAL OR NAVIGATION.	Length of Navigation constructed up to 31st Dec., 1898.	LOCKS.				
		Name or Designation of Lock or pair of Locks, or Flight of Locks, and Number in Flight,* and points of junction of Canal with other Canals or branches.	Minimum Dimensions.			Total Rise or Fall.
			Length.	Width.	Depth of Water on Cill.	
	m. ch.		ft. in.	ft. in.	ft. in.	ft. in.
BOYNE NAVIGATION commences at high tidal mark at Oldbridge, near Drogheda, and thence along the River Boyne through Slane and Stackallen to Navan.	19 0	1. Oldbridge Lock, ...	78 0	14 6	4 6	Not stated.
		2 Oldbridge Guard, ...	This is the measurement of the smallest lock. The others average about 82 feet in length and same width as above.			
		3. Staleen Lock, ...				
		4. Staleen Guard, ...				
		5. Broe Lock, ...				
		6. Broe Guard, ...				
		7. Rosnaree Double Lock,				
		8. Slane Bridge Lock, ...				
		9. Famer Lock, ...				
		10. Carrickdexter, ...				
		11 Castlelin Lock, ...				
		12. Cruisetown Lock, ...				
		13. Deer Park Lock, ...				
		14. Deer Guard, ...				
		15. Stackallan, ...				
		16. Ardmulchen, ...				
		17. Faganstown, ...				
		19. Blackcastle, ...				
		20. Metges Lock, ...				
			Main Line to Ballinasloe:—			
GRAND CANAL:—		Junction with Liffey Branch at 72 ch.				Rise.
James Street Harbour, Dublin, to Ballinasloe, County Galway, through Kildare, King's and Queen's Counties, and part of County Galway.	93 30	1. Double, ...	81 0	16 0	5 6	13 8
		2.	81 0	16 0	5 6	12 6
		3. Double, ...	63 6	14 0	5 6	20 2
		4.	63 6	11 0	5 6	12 6
		5.	63 6	14 0	5 0	10 0
Branch to River Liffey. James Street Harbour to Ringsend.	3 60	6.	63 6	14 0	5 6	11 7
		7.	63 6	14 0	5 6	12 4
Naas and Corbally Branch. Sallins to Naas and Corbally, County Kildare.	7 70	8.	63 6	11 0	5 6	8 9
		9. Double, ...	63 6	11 0	5 6	16 7
		10.	63 6	14 0	5 6	8 10
Athy Branch; Lowtown to Athy, County Kildare.	28 40	11.	63 6	14 0	5 6	11 5
		12.	63 6	14 0	3 0	12 9
Low Level Junction at Lowtown,	1 40	13 Double, ...	63 6	14 0	5 6	16 0
Mountmellick Branch. Monasterevan, Kildare, to Mountmellick, Queen's County.	11 40	Morrell Supply enters at 15 m. 45 ch.				
		14.	63 6	14 0	5 0	6 9
Edenderry Branch, ...	1 0	15.	63 6	14 0	5 0	9 10
Kilbeggan Branch. Ballycommon, King's County, to Kilbeggan, County Westmeath.	8 0	Monread Supply enters at 17 m. 25 ch.				
		Naas Branch at 18 m. 40 ch.				
Tullamore Branch, ...	0 15	16.	63 6	14 0	5 6	8 1
Miltown Canal, Lowtown, County Kildare, to Miltown.	7 70	17.	63 6	14 0	5 6	7 10
		18.	63 6	14 0	5 6	5 8
Blackwood Canal. From Main Line to Blackwood, County Kildare.	3 60	Blackwood Branch at 23 m. 02 ch.				
River Barrow Line. Athy to St Mullins.	41 73	Miltown Branch Athy Branch } at 26 m.				Fall.
	209 18	19.	63 6	14 0	5 6	7 6
		Athy Branch Low Level at 26 m. 13 ch.				
		20.	63 6	14 0	5 6	9 0

No. 3.—WORKS, &c.

showing the Length of Navigation constructed, the Names and Dimensions of the Locks
Size of Boats that can use the Canal or Navigation as at 31st December, 1898.

of locks shall mean locks not more than 400 yards apart.]

TUNNELS.					RESERVOIRS.				
Name.	Length.	If any Tow Path runs through; if Traction is provided; and how boats are hauled through	Minimum Height above Water Level.	Minimum Width at Water Level.	Name or Number.	Capacity in Cubic Feet.	Source of Water Supply.	Maximum Size of Boats that can use Canal or Navigation. L. = Length. W. = Width. D. = Draught. H. = Headway.	REMARKS.
			ft. in.	ft. in.				ft. in.	
-	-	-	-	-	-	-	The River Boyne at Navan.	L 70 0 W. 14 3 D. 4 6 H. 7 0	
-	-	-	-	-	Blackwood Reservoir.	5,880,600	-	L. 61 0 W. 13 6 D. 4 6 H. 9 0	
							Principal Supplies to Grand Canal.		
							Main Line to Ballinasloe.	Morrell. Monread.	
							Naas Branch,...	Mullacash and Killashee. Rathasker. Corbally.	
							Summit level, Main Line.	Lowtown. Miltown.	
							Main Line to Ballinasloe.	Killeen. Yellow River. Ballymullen. Maiden River. Newtown. Derry Cooly Lough Boora.	

IRISH CANAL RETURNS, 1898.

TABLE XIX.—RETURN in respect of the CANALS and NAVIGATIONS

NAME OF CANAL OR NAVIGATION.	Length of Navigation constructed up to 31st Dec., 1898.	LOCKS.								
		Name or Designation of Lock or pair of Locks, or Flight of Locks, and Number in Flight, and points of junction of Canal with other Canals or branches.	Minimum Dimensions.						Total Rise or Fall.	
			Length.		Width.		Depth of Water on Cill.			
	m. ch.		ft.	in.	ft.	in.	ft.	in.	ft.	in.
GRAND CANAL—*continued.*		Edenderry and Kilbeggan. Branches at 36 m. 75 ch. and 51 m. 45 ch.								
		Yellow River Supply.								
		Ballymullen Supply at 48 m. 32 ch.							Fall.	
		21.	63	6	14	0	5	6	9	0
		22.	63	6	14	0	5	6	9	0
		23.	63	6	14	0	5	6	9	0
		24.	63	6	14	0	5	6	9	0
		25.	63	6	14	0	5	6	9	8
		26.	63	6	14	0	5	6	9	8
		Tullamore Junction with Harbour, at 56 m. 55 ch.								
		27.	63	6	14	0	5	6	8	4
		28.	63	6	14	0	5	6	8	4
		29	63	6	14	0	5	6	8	4
		Maiden River enters canal at 59 m. 30 ch.								
		30.	63	6	14	0	5	6	9	0
		31.	63	6	14	0	5	6	9	0
		New Town Supply enters canal at 64 m. 21 ch.								
		Derry Cooly Supply enters canal at 64 m. 41 ch.								
		Lough Boora Supply enters canal at 68 m. 25 ch.								
		32.	63	6	14	0	5	6	10	0
		33. Double, ...	63	6	14	0	5	6	10	0
		34.	63	6	14	0	5	0	9	0
		35.	73	0	15	0	6	0	5	6
		36.	73	0	15	6	6	0	5	6
		Shannon Harbour at 78 m. 25 ch.								
		River Shannon.							Rise.	
		Fanning Lock, ...	63	6	14	0	5	6	10	0
		Kylemore Lock, ...	63	6	14	0	5	6	7	0
		Kylemore Supply enters canal at 85 m. 5 ch.								
		Ballyoure Supply enters canal at 91 m. 55 ch.								
			Mountmellick Branch :—							
			Monasterevan to Mountmellick, 11 m. 40 ch.							
		1.	63	6	14	0	5	6	10	4
		2.	63	6	14	0	5	6	9	9
		Wood Brook Supply.								
		3.	63	6	14	0	5	6	9	6
		Treogue Supply.								
			Athy Branch :—							
		*Milltown Branch at 27 m. 34 ch.	Lowtown to Athy, 20 m. 40 ch.						Fall.	
		19.	63	6	14	0	5	6	7	4
		20.	63	6	14	0	5	6	6	9
		21.	63	6	14	6	5	6	6	7
		White Eye Supply enters at 28 m. 24 ch.								
		22.	63	6	14	0	5	6	10	0

No. 3.—WORKS, &c

in IRELAND, showing the Length of Navigations constructed, &c.

TUNNELS.					RESERVOIRS.		Sources of Water Supply.	Maximum Size of Boats that can use Canal or Navigation. L.=Length. W.=Width. D.=Draught. H.=Headway.	REMARKS.
Name.	Length.	If any Tow Path runs through; if Traction is provided; and how boats are hauled through.	Minimum Height above Water Level.	Minimum Width at Water Level.	Name or Number.	Capacity in Cubic Feet.			
			ft. in.	ft. in.					
							Main Line to Ballinasloe.	Kylemore Ballynure.	
							Athy Branch, ...	Pluckerstown. White Eye. White Well. Derrybrock. Clonmoyle. Prospect.	
							Mountmellick Branch.	Treogue. Woodbrook.	
									*The mileage in each case is from Dublin.

TABLE XIX.—RETURN in respect of the CANALS and NAVIGATIONS

Name of Canal or Navigation.	Length of Navigation constructed up to 31st Dec., 1898.	Locks.				
		Name or Designation of Lock or pair of Locks, or Flight of Locks, and Number in Flight, and points of junction of Canal with other Canals or branches.	Minimum Dimensions.			Total Rise or Fall.
			Length.	Width.	Depth of Water on Cill.	
	m. ch.		ft. in.	ft. in.	ft. in.	ft. in.
GRAND CANAL—*continued.*		Pluckerstown Supply enters at 31 m. 31 ch.				
		White Well Supply enters at 33 m. 40 ch.				
		Rathangan (Town) at 33 m. 60 ch.				
		23. Double, ...	63 6	14 0	5 6	17 2
		Mount Prospect Supply enters at 34 m. 37 ch.				
		Clonmoyle Supply enters at 36 m. 28 ch.				
		Mount Rice Supply enters at 37 m. 38 ch.				
		24. Double, ...	63 6	14 0	5 6	13 0
		Monasterevan (Town) at 40 m. 20 ch				
		Mount Mellick Branch at 40 m. 27 ch.				
		25.	63 6	14 0	5 0	7 2
		Annagh Supply enters at 30 m. 28 ch.				
		Derrybrock Supply enters at 45 m. 78 ch.				Fall.
		26.	63 6	14 0	5 6	9 6
		27.	63 6	14 0	5 6	10 0
		Athy (Town) at 54 m. 10 ch.				
		28.	63 6	14 0	5 6	9 0
		River Barrow at 54 m. 40 ch.				
			Liffey Branch :—			
			Liffey to James Street, Dublin, 3 m. 60 ch.			
		Westmoreland Lock, ...	60 3	14 0	—	16 0 Rise from ordinary low water.
		1.	63 6	14 6	6	4 9
		2.	63 6	14 0	5 6	9 0
		3.	63 6	14 0	5 6	9 0
		4.	63 6	14 0	5 6	9 0
		5.	63 6	14 0	5 6	9 0
		6.	63 6	14 0	5 6	9 0
		7.	63 6	14 0	5 6	8 9
		Junction with Main Canal at 72 ch. from Canal Harbour, James Street, Dublin.				

No. 3.—WORKS, &c.

in IRELAND, showing the Length of Navigations constructed, &c.

TUNNELS.					RESERVOIRS.		Source of Water Supply.	Maximum Size of Boats that can use Canal or Navigation. L.—Length. W.—Width. D.—Draught. H.—Headway.	REMARKS.
Name.	Length.	If any Tow Path runs through; if Traction is provided: and how boats are hauled through.	Minimum Height above Water Level.	Minimum Width at Water Level.	Name or Number.	Capacity in Cubic Feet.			
			ft. in.	ft. in.				ft. in.	

TABLE XIX.—RETURN in respect of the CANALS and NAVIGATIONS

NAME OF CANAL OR NAVIGATION.	Length of Navigation constructed up to 31st Dec., 1898.	LOCKS. Name or Designation of Lock or pair of Locks, or Flight of Locks, and Number in Flight, and points of Junction of Canal with other Canals or branches.	Minimum Dimensions. Length.	Width.	Depth of Water on Cill.		Total Rise or Fall.
	m. ch.						
GRAND CANAL—*continued.*			*Naas and Corbally Branch:—* Sallins to Corbally, 7 m. 70 ch.				
			ft. in.	ft. in.	ft. in.		Rise. ft. in.
		1.	61 6	14 0	5 6		8 0
		2.	61 6	14 0	5 5		11 0
		Mullacash and Killashee Supply enters at 19 m. 47 ch.					
		3.	61 6	14 0	5 6		8 0
		4.	61 6	14 0	5 6		9 0
		5.	61 5	14 0	5 5		8 0
		Naas (Town). Rathasker Supply enters at 20 m. 40 ch.					
		Corbally Supply enters at 25 m. 65 ch.					
		No locks on Edenderry, Kilbeggan, Blackwood, and Miltown Branches.					
			River Barrow:— Athy to St. Mullins, 41 m. 73 ch.				
					Up.	Lo.	
		Ardreigh, ...	73 0	15 6	5 5	11 6	3 9
		Levitstown, ...	„	„	7 1	6 5	6 5
		Mageney, ...	„	„	4 5	6 0	2 11
		Bestfield, ...	„	„	4 3	5 5	4 8
		Carlow, ...	„	„	5 0	5 3	4 5
		Milford, ...	„	„	4 11	4 10	7 3
		Ravendon, ...	„	„	4 7	5 2	3 0
		Ratheelen, ...	„	„	5 0	5 3	6 1
		Bagnalstown, ...	„	„	6 8	3 9	10 0
		Fenniscourt, ...	„	„	2 11	4 8	4 2
		Sliguff, ...	„	„	4 8	5 4	3 6
		Upper Bally Ellen, ...	„	„	7 5	4 6	8 1
		Lower Bally Ellen, ...	„	„	3 1	4 6	5 0
		Ballytiglea, ...	„	„	3 0	5 5	4 9
		Borris, ...	„	„	2 6	3 7	5 2
		Ballingrave, ...	„	„	2 4	5 3	3 2
		Clasquay, ...	„	„	3 10	3 9	5 6
		Bally Keenan, ...	„	13 8	3 5	3 10	11 2
		Graigue, ...	„	15 6	5 5	4 10	3 8
		Tinnah Inch, ...	„	„	7 6	5 6	9 9
		Carrick Lead, ...	„	„	5 4	5 10	5 11
		St. Mullins, ...	„	„	7 2	3 4	9 3

No. 3.—WORKS, &c.

in IRELAND, showing the Length of Navigations constructed, &c.

TUNNELS.					RESERVOIRS.				
Name.	Length.	If any Tow Path runs through; if Traction is provided; and how boats are hauled through.	Minimum Height above Water Level.	Minimum Width at Water Level.	Name or Number.	Capacity in Cubic Feet.	Sources of Water Supply.	Maximum Size of Boats that can use Canal or Navigation. L.=Length. W.=Width. D.=Draught. H.=Headway.	REMARKS.
			ft. in.	ft. in.				ft. in.	
—	—	—	—	—	—	—	River Barrow and its tributaries.	ft. in L. 68 0 W. 13 4 D. 4 0 H. 8 0	Depth of water on cill are low summer depths. The River Barrow is quickly affected by floods rising in a very short time. H. and D. may be taken as an average. In low summer water draught of of boats must be reduced. In floods there are bridges where H. would only be about 6 feet.

TABLE XIX.—RETURN in respect of the CANALS and NAVIGATIONS

NAME OF CANAL OR NAVIGATION.	Length of Navigation constructed up to 31st Dec., 1898.	Locks.				
		Name or Designation of Lock or pair of Locks, or Flight of Locks and Number in Flight, and points of junction of Canal with other Canals or branches.	Maximum Dimensions			Total Rise or Fall.
			Length.	Width.	Depth of Water on Cill.	
	m. ch.		ft. in.	ft. in.	ft. in.	ft. in.
LAGAN, ULSTER, AND COAL-ISLAND CANALS		No. 0. Tidal Lock at Belfast end (junction with Lagan River)	71 0	17 9	4 4 at low water.	Rise. 6 6
Lagan Canal commences at Stranmillis about 1 mile from Belfast, and communicating with Belfast Harbour by the Lagan River, passes the Towns of Lisburn and Moira, and enters Lough Neagh about 2 miles from the Town of Lurgan.	28 20	1.	71 0	15 8	6 6	2 10
		2.	71 7	15 8		8 6
		3.	73 0	16 8		7 10
		4.	72 0	15 7		8 2
		5.	72 3	15 8		8 11
		6.	72 10	15 8		4 6
		7.	75 8	15 7		7 1
		8.	75 3	15 8		10 6
		9.	73 0	16 7		2 3
		10.	75 4	15 8		11 7
		11.	73 8	15 2		8 10
		12.	73 6	15 0		8 3
		13.	75 0	15 6		6 7
		14. Flight known as Union Locks.	78 8	15 6		6 6
		15.	76 6	15 6		6 6
		16.	77 0	15 7		6 7
		17.	76 6	15 7		8 6
						Fall.
		18.	71 0	16 6		6 6
		19.	71 0	16 6		7 6
		20.	71 0	16 3		6 6
		21.	70 6	16 0		7 3½
		22.	71 0	15 6		6 4½
		23.	71 0	16 6		8 11½
		24.	71 3	16 4		7 3
		25.	71 0	16 4		7 10
		26. Junction with Lough Neagh.	78 3	16 2		16 4½
						Rise.
Ulster Canal, commencing at Charlemont County Armagh, and communicating with Lough Neagh by the Blackwater River, passes the Towns of Caledon, Middletown, Monaghan and Clones, and enters Upper Lough Erne at Wattle Bridge, County Fermanagh.	46 0	No 1 Charlemont, ...	67 2	12 3	6 0	11 3½
		2.	68 6	12 1		8 1
		3.	68 0	11 10		8 2
		4.	68 6	12 1		8 0
		5.	69 11	12 0		8 6
		6.	69 2	12 0		8 0
		7.	68 2	12 0		8 6½
		8.	69 0	12 0		8 8
		9.	69 4	12 1		8 1
		10	68 6	12 2		8 2
		11.	69 4	12 1		7 11
		12.	69 4	12 1		8 0
		13	69 4	12 0		7 10
		14.	69 6	12 2		7 10
		15.	69 2	12 2		8 6
		16.	67 7	12 2		7 2
		17	70 3	12 0		7 8
		18.	70 0	11 11		8 8
		19.	70 8	11 11		6 3½
						Fall.
		20.	69 8	12 1		8 5
		21.	69 4	11 10		8 11
		22.	68 5	12 6		7 10½
		23.	69 10	12 9		8 9½
		24.	70 6	12 6		7 8
		25.	68 4	11 8		7 6
		26. Wattle Bridge, ...	68 4	11 8½		11 8

No. 3—WORKS, &c.

in IRELAND, showing the Length of Navigations constructed, &c.

TUNNELS.					RESERVOIRS.				
Name.	Length.	If any Tow Path runs through; if Traction is provided; and how boats are hauled through.	Minimum Height above Water Level.	Minimum Width at Water Level.	Name or Number.	Capacity in Cubic Feet.	Sources of Water Supply.	Maximum Size of Boats that can use Canal or Navigation. L.=Length. W.=Width. D.=Draught. H.=Headway.	REMARKS.
			ft. in.	ft. in.				ft. in.	
—	—	—	—	—	—	—	The River Lagan from 1 mile beyond Lisburn to Belfast. From 1 mile beyond Lisburn to Lough Neagh by natural feeders. There is also a pumping station for pumping water from Lough Neagh, but this is only required in very exceptional seasons.	L. 62 0 W. 14 6 D. 5 6 H. 6 3	
—	—	—	—	—	Quiglough Reservoir.	About 21,000,000 cubic feet capacity.	By natural feeders at various places, and by a reservoir which is filled by surplus water from Blackwater River and several small streams.	L. 62 0 W. 11 6 D. 5 0 H. 6 0	

TABLE XIX.—RETURN in respect of the CANALS and NAVIGATIONS

NAME OF CANAL OR NAVIGATION.	Length of Navigation constructed up to 31st Dec., 1898.	LOCKS.				
		Name or Designation of Lock or pair of Locks, or Flight of Locks, and Number in Flight, and points of junction of Canal with other Canals or branches.	Minimum Dimensions. Length.	Width.	Depth of Water on Cill.	Total Rise or Fall.
	m. ch.		ft. in	ft. in.	ft. in.	ft. in.
LAGAN, ULSTER AND COALISLAND CANALS—*con.*						
		No.				Rise.
Coalisland Canal branching off the Blackwater River, about 3 miles from Lough Neagh, and terminating at Coalisland, County Tyrone.	4 40	1. Blackwater River, ...	51 6	15 0	5 0	7 8
		2.	01 6	15 3		0 0
		3. Double Lock, ...	02 0 62 5	15 0		15 8
		4.	61 6	15 0		5 2
		5.	62 0	15 0		5 2
		6.	51 8	14 11		7 0
		7. Coalisland, ...	63 0	15 4		5 8
LOWER BANN NAVIGATION. Commencing at Cutts Coleraine Tidal Lock and ending at Ballyronan and Antrim, passing through four single locks and one double lock to Toome, and crossing through Lough Neagh to Ballyronan and Antrim.	From Toome to Coleraine, 32 0	1. Toome, ...	130 0	20 6	7 0 summer level.	5 0
		2. Portna (double),... ...	130 0	20 0		
		3. Movanagher, ...	130 0	20 0	10 6 winter level.	
		4. Carnroe, ...	130 0	20 5		
		5. Cutts, Coleraine,... ...	130 0	20 0		
NEWRY NAVIGATION. From Newry *via* Jerrittspass, Drumbanagher, Poyntzpass, Scarva, Madden (Tandragee), Moyallon, to Point of Whitecoat at junction of River Bann, within one mile of Portadown.	18 0	The 1st Lock is connected with the Harbour and is not on the canal.				
		2nd Lock, ...	72 2	15 5	6 0	Total rise, 58 3 Total fall, 26 4
		3rd „	69 3	15 2	6 0	
		4th „	70 3	15 1	5 10	
		5th „	70 6	15 2	5 7	
		6th „	70 0	15 2	5 4	
		7th „	70 0	15 2	5 4	
		8th „	70 0	15 2	5 4	
		9th „	69 7	15 0	5 7	
		10th „	69 8	15 1	5 2	
		11th „	72 0	15 3	5 10	
		12th „	70 10	15 2	5 8	
		13th „	09 4	15 2	0 0	
		14th „	71 2	15 0	6 2	

No. 3.—WORKS, &c.

in IRELAND, showing the Length of Navigation constructed, &c.

TUNNELS.					RESERVOIRS.				
Name.	Length.	If any Tow Path runs through; if Traction is provided; and how boats are hauled through.	Minimum Height above Water Level.	Minimum Width at Water Level.	Name or Number.	Capacity in Cubic Feet.	Sources of Water Supply.	Maximum Size of Boats that can use Canal or Navigation. L.=Length. W.=Width. D.=Draught. H.=Headway.	REMARKS.
			ft. in					ft. in.	
—	—	—	—	—	—	—	River Tarrant, which enters at Coalisland.	L. 62 0 W. 14 0 D. 5 0 H. 6 0	
—	—	—	—	—	—	—	Lough Neagh.	L. 110 0 W. 18 6 D. 6 0 at summer level.	
—	—	—	—	—	Lough Shark.	About 100 stat. acres.	River Couser, Lough Shark, and Tandragee feeder, 3¾ miles, Loughbrickland feeder, 2 miles.	L. 64 6 W. 15 1 D. 5 2 Lowest bridge. 9 3	

TABLE XIX.—RETURN in respect of the CANALS and NAVIGATIONS

NAME OF CANAL OR NAVIGATION	Length of Navigation constructed up to 31st Dec., 1898.	LOCKS. Name or Designation of Lock or pair of Locks, or Flight of Locks, and Number in Flight, and points of junction of Canal, with other Canals or branches	Minimum Dimensions. Length.	Minimum Dimensions. Width.	Depth of Water on Cill. Lower.	Depth of Water on Cill. Upper.	Total Rise or Fall.
	m. ch.		ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
MIDLAND GREAT WESTERN RAILWAY OF IRELAND COMPANY							
The Royal Canal, from Spencer Dock Dublin to Richmond Harbour on Longford, via Maynooth, Enfield, Killucan, Mullingar, Ballynacargy, Abbeyshrule, Ballymahon, Keenagh, Killashee,	95 69	Junction with River Liffey, Sea Lock.					
		No. 1 Lock, Junction of Canal with Spencer Dock.					
		Dublin flight, from Spencer Dock to Blanchardstown, 1 locks.					
		Lock No. 1, Newcomen Bridge.	70 6	14 10	7 0	6 6	7 4
		" 2. Flight	80 6	14 6	7 0	6 10	17 6
		" 3. Flight	80 8	14 6	8 8	6 2	16 5
		" 4. Flight	84 6	14 0	8 2	6 4	18 4
		Junction of Broadstone Branch one mile long, with main canal.					
		Lock No. 5, Flight	80 8	14 0	6 2	6 6	17 2
		" 6, Flight	80 8	14 0	6 5	6 6	16 8
		" 7.	80 4	14 0	8 3	6 0	6 10
		" 8.	84 4	14 0	8 11	6 6	9 9
		" 9.	80 2	14 0	8 10	6 6	6 9
		" 10.	81 6	14 0	6 2	6 0	12 9
		" 11.	81 0	14 0	6 0	6 6	17 0
		" 12.	80 4	14 0	6 10	6 7	20 0
		" 13.	79 10	14 4	6 0	6 10	9 8
		" 14.	78 7	14 4	6 2	6 2	8 9
		" 15.	78 6	14 4	5 10	6 6	6 5
		" 16.	79 8	13 10	6 6	6 6	10 9
		" 17.	79 8	14 0	5 10	5 6	18 9
		Killucan flight, from Thomastown to Coralstown, 6 locks					
		Lock No. 18.	75 0	13 5½	5 10	6 6	6 6
		" 19.	75 3	11 7	6 6	6 0	9 0
		" 20.	74 2	12 0	5 5	5 7	8 2
		" 21.	75 0	16 0	5 10	6 0	6 0
		" 22.	75 6	13 6	5 9	6 0	9 0
		" 23.	75 10	13 6	5 10	5 6	8 0
		" 24. Flight	75 6	13 7	6 0	5 11	8 10
		" 25. Flight	75 7	13 6	5 10	6 6	7 0
		" 26.	75 5	14 6	6 6	6 3	6 0
		" 27.	75 8	14 6	5 8	6 4	9 10
		" 28.	76 6	14 6	5 6	6 4	7 10
		Sonna flight.					
		Lock No. 29.	75 5	14 6	6 4	6 6	9 0
		" 30.	77 0	14 0	6 7	6 4	9 8
		" 31.	75 8	14 6	5 10	6 4	9 8
		" 32.	76 4	14 0	5 8	6 0	9 8
		" 33.	76 4	14 0	6 0	6 0	9 0
		" 34.	76 3	14 0	5 6	6 6	9 0
		" 35.	76 6	14 0	5 2	6 4	8 4
		" 36.	76 0	14 0	5 6	4 10	9 2
		" 37.	76 3	14 6	6 6	6 4	6 0
		" 38.	76 3	14 0	4 11	6 8	6 0
		" 39.	76 6	14 0	5 6	4 11	8 10
		" 40.	76 10	14 0	4 11	6 4	10 8
		" 41.	76 6	14 0	5 3	6 0	10 1
		" 42.	76 0	14 6	4 8	6 4	10 8

No. 3.—WORKS, &c.

in IRELAND, showing the Length of Navigation constructed, &c.

TUNNELS.					RESERVOIRS.		Source of Water Supply.	Maximum Size of Boats that can use Canal or Navigation. L.=Length. W.=Width. D.=Draught. H.=Headway.	REMARKS.
Name.	Length.	If any Tow Path runs through if Traction is provided; and how boats are hauled through.	Minimum Height above Water Level.	Minimum Width at Water Level.	Name or Number	Capacity in Cubic Feet.			
			ft. in.	ft. in.				ft. in	
—	—	—	—	—	Lough Owel.	392,040,000	Lough Owell, rainfall on some 5,000 acres of rising ground round the lake River Rathwire, Thomastown. Landdrains at Castlegaddery and Fernlock during wet season only.	L. 70 0 W. 13 1 D. 4 6 H. 10 0	

TABLE XIX.—RETURN in respect of the CANALS and NAVIGATIONS

NAME OF CANAL OR NAVIGATION.	Length of Navigation constructed up to 31st Dec., 1898.		LOCKS.					
			Name or Designation of Lock or pair of Locks, or Flight of Locks, and Number in Flight, and points of junction of Canal, with other Canals or branches.	Minimum Dimensions.				Total Rise or Fall.
				Length.	Width.	Depth of Water on Cill.		
						Lower.	Upper.	
	m. ch.			ft. in.	ft. in.	ft. in.		ft. in.
MIDLAND GREAT WESTERN RAILWAY OF IRELAND COMPANY—*continued.*								
The Royal Canal—*continued*, ...			Junction of Longford Branch, 5½ miles long, with main canal.					
			Lock No. 43, ...	70 9	14 0	5 5	4 8	0 5
			" 44, ...	76 9	14 0	4 9	5 4	10 8
			" 45, ...	77 6	14 0	5 4	5 0	8 10
			" 46, ...	70 10	14 0	5 4	5 4	9 1
			Richmond Harbour immediately above 45th lock.					
				From Spencer Dock to Summit level rise 311 ft. 11 ins. From Summit level to Camlin River, below 46th lock, fall 189 ft. 6 in.				
SHANNON NAVIGATION.	Length.	Total Distances.						
The Shannon Navigation is the Shannon River from Limerick to Lough Allen.								
Limerick Canal, ...	1 11		Tidal Lock, ...	124 9	21 0	5 0		Rise 5 0 about.
			Park Lock, ...	81 6	15 11	5 0		Nil (except in floods).
River Shannon, ...	1 20	2 31						
			Annabeg Lock, ...	74 9	16 8	5 0		Rise. 6 0
			Gillogue Lower, Pair of Locks	93 7	16 10	5 0		4 5
			(Double) Upper,	95 1	10 0	5 0		7 0
Limerick Canal, ...	5 63	8 14	Newtown Lock, ...	78 3	15 11	5 0		8 0
			Clonlara Lock, ...	78 3	15 2	5 0		10 5
			Monaskea Lock, ...	77 8	15 9	5 0		10 4
			Errina, Lower, Pair of Locks	81 10	15 0	5 0		11 1
			(Double) Upper	84 2	15 8	5 0		2 6 more in floods.
River Shannon, ...	4 56	12 70						
			Cussane, Lower, Pair of Locks	76 0	16 2	5 0		6 8
Limerick Canal, ...	1 10	14 0	(Double) Upper,	75 2	16 0	5 0		9 1
			Moyes Lock, ...	70 10	15 11	5 0		6 3
			Killaloe Lock, ...	80 8	16 0	7 0		Nil (except in floods)
	1 50		Scariff River, Junction with Shannon in Lough Derg.					

No. 3.—WORKS, &c.

in **Ireland**, showing the Length of Navigation constructed, &c.

Tunnels.					Reservoirs.		Source of Water Supply.	Maximum Size of Boats that can use Canal or Navigation. L.=Length. W.=Width. D.=Draught. H.=Headway.	Remarks.
Name.	Length.	If any Tow Path runs through: if Traction is provided and how boats are hauled through	Minimum Height above Water Level.	Minimum Width at Water Level.	Name or Number.	Capacity in Cubic Feet.			
			ft. in.	ft. in.				ft. in.	
–	–	–	–	–	–	–	River Shannon.	L. 73 0 W. 14 9 D. 4 10 H. 12 0 Wood Bridge (lowest bridge).	Maximum draught of boats in Limerick canal is 4′ 10″.
–	–	–	–	–	–	–	Scariff River.		

TABLE XIX.—RETURN in respect of the CANALS and NAVIGATIONS

NAME OF CANAL OR NAVIGATION.	Length of Navigation constructed up to 31st Dec., 1898.		LOCKS.				
			Name or Designation of Lock or pair of Locks, or Flight of Locks, and Number in Flight, and points of junction of Canal with other Canals or branches.	Minimum Dimensions.			Total Rise or Fall.
				Length.	Width.	Depth of Water on Cill.	
	m. ch. Length.	Distances. Total		ft. in.	ft. in.	ft. in.	ft. in.
SHANNON NAVIGATION—*con.*							
River Shannon, ...	100 33	114 33	Victoria Lock,*	142 0	40 0	7 0	8 5
			Shannon Harbour, Entrance to Grand Canal and Ballinasloe Canal.				
			Athlone Lock, ...	127 0	40 0	7 0	7 0
			Tarmonbarry Lock, ...	102 0	30 0	0 0	8 8
			Clondrah Lock, ...	82 1	18 1	5 0	7 6
			Entrance to Royal Canal,				
			Rooskey Lock, ...	102 0	30 0	6 0	3 4
Jamestown Canal, ...	1 51	116 4	Albert Lock, ...	102 0	30 0	0 0	5 9
River Shannon, ...	7 16	123 20					
Boyle Water, ...	(8 0)		Clarendon Lock, ...	102 0	30 0	6 0	Rise. 4 0
River Shannon, ...	3 60	127 0					
Lough Allen Canal, ...	4 40		Battlebridge Lock, ...	73 8	13 0	4 0*	13 0
			Drumleague Lock, ...	07 4	13 10	4 0	10 0
Enters Lough Allen, ...		131 40	The Boyle River joins the Shannon at 123 m. 20 ch, The Ballinamore and Ballyconnell joins at about 126 miles.	* Note.—The Navigation depth in the Lough Allen Canal is only 4ft. 6in.			
The Maigue Navigation is a tidal river a short way below Limerick, but the Board of Works merely have one swivel bridge and a small quay, total length about 100 yards.	MAIGUE NAVIGATION. The Maigue Navigation is about 9 miles in a Tidal River. The Board of Works have only control of 1 swivel bridge and 1 small quay beside it. The swivel bridge is 16 feet span.						
STRABANE CANAL.							
Four miles north of Strabane. Joins River Foyle.	4 5		1st Lock, ...	117 0	24 0	6 0	7 to 4 ft.
			2nd Lock, ...	108 0	23 0	7 0	7 to 4 ft.
TOTAL IRELAND, ...	586 32						

No. 3.—WORKS, &c.

in IRELAND, showing the Length of Navigation constructed, &c.

TUNNELS.					RESERVOIRS.		Source of Water Supply.	Maximum Size of Boats that can use Canal or Navigation. L.=Length. W.=Width. D.=Draught. H.=Headway.	REMARKS.
Name.	Length.	If any Tow Path runs through; if Traction is provided; and how boats are hauled through.	Minimum Height above Water Level.	Minimum Width at Water Level.	Name or Number.	Capacity in Cubic Feet.			
			ft. in.	ft. in.				ft. in.	
—	—	—	—	—	—	—	Shannon.	L. 100 0 W. 29 0 D. 6 0 H. 15 6 Carrick Bridge, River being at navigation level. Above Athlone, draught about 4 ft. 8 in.	*Clonaheenogue Canal about 1 m. 60 ch. long. Not used.
							Boyle, River Shannon.	Lough Allen Canal. L. 66 0 W. 13 0 D. 4 6 H. 11 6 Battlebridge (lowest bridge.)	
—	—	—	—	—	—	—	Moorlough 7 miles from Canal.	L. 70 0 W. 16 6 D. 5 0	2 Swivel Bridges. 1 bridge in course of construction, 30 ft. span, 12 ft. headway.

Statement showing the Total Expenditure and Receipts, and certain items thereof, of the **Grand Canal Company** for each half-year, from 1891 to 30th June, 1901.

PERIOD.	Expenditure.			Receipts.		
	Maintenance of Ways, Works, and Stations.	Carrying Trade Account.*	Total Expenditure (including items not specially shown.)	Freights and Towage.	Tolls	Total Receipts (including items not specially shown.)
Six Months ended—	£	£	£	£	£	£
30th June, 1891,	3,332	17,818	27,603	24,631	3,997	33 214
31st December, 1891,	2,940	13,784	21,607	19,634	3,995	28,344
30th June, 1892,	2,647	14,298	22,690	22,876	3,813	31,647
31st December, 1892,	2,429	14,748	22,728	23,379	3,610	32,772
30th June, 1893,	2,336	15,479	23,330	27,979	3,697	37,019
31st December, 1893,	2,652	16,491	24,013	28,045	3,399	36,986
30th June, 1894,	2,218	17 089	24 564	28,745	3,800	37,690
31st December, 1894,	3,426	21,237	29,302	34,225	3,516	42,242
30th June, 1895,	2,489	19,772	28,108	29,999	2,054	37,593
31st December, 1895,	2,816	21,534	29,579	33,469	3,111	41,330
30th June, 1896,	2,967	22 186	31,455	35,149	3,105	43,125
31st December, 1896,	3,049	21 542	29 737	32,842	2,927	40,676
30th June, 1897,	2,700	24,013	32,639	36,516	2,977	44,717
31st December, 1897,	2,763	24,549	32,323	36,308	2,779	44,122
30th June, 1898,	2,711	24,787	33,358	37,090	2,731	45,044
31st December, 1898,	3,195	23,636	32,060	35,853	2,692	43,993
30th June, 1899,	3,400	24,524	34,766	38,570	2,706	47,388
31st December, 1899,	3,234	25,042	33,434	36,980	2,452	45,051
30th June, 1900,	2 697	26,469	34,699	36,170	2,310	44,581
31st December, 1900,	3,508	24,864	33,794	35,669	2,279	43,702
30th June, 1901,	2,993	24,691	34,000	37,290	2 303	45,208
Total,	60,502	438,553	615,855	671,419	64,913	846,444

The differences between the Total Receipts and the Total Expenditure represent the balances carried each half-year to the Net Revenue Account, out of which dividends are paid.

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[*] In order to give an idea of the items of this account the following detailed statement for the half-year ended 30th June, 1901, is appended.

CARRYING TRADE ACCOUNT.

Half-year ended 30th June, 1900.			—	Half-year ended 30th June, 1901.		
£	s.	d.		£	s.	d.
4,622	6	6	Haulage of Boats by Horses,	5,007	14	9
—			Towing Steamer, River Liffey,	—		
4,023	19	3	Towing and Cargo Steamers,	1,541	10	9
2,129	17	5	Shannon Steamers,	2,256	10	9
5,064	4	7	Wages of Crews of Boats,	5,126	16	10
1,417	5	5	Repairs of Boats,	1,096	2	5
2,295	8	10	Hire of Boats Chartered by the Co.,	2,569	15	11
3,994	17	7	Agency and Labourage—Dublin and all Stations,	4,037	2	3
1,101	15	11	Shannon Tolls,	1,173	7	7
84	7	11	Compensation for Losses,	83	6	2
125	3	0	Postage and Receipt Stamps—proportion of,	130	17	2
150	17	4	Books, Stationery, and Advertising,	185	10	6
50	5	4	Car-hire and Travelling,	58	16	9
29	2	6	Boatmen's Benefit Society,	52	7	11
125	2	10	Insurance,	122	18	6
73	2	0	Gas at James's-street Harbour,	72	8	0
570	1	7	Incidentals,	014	12	8
610	18	10	Stores supplied to Boats,	560	9	3
26,468	16	10		24,690	17	2

The following statement (A1) shows the mileage of the Grand Canal Company's lines in 1891 and in 1901 :—

Grand Canals Company's Lines,	Miles.	
	1891.	1901.
Circular and Main Lines—Ringsend Docks, Dublin to Lowtown, ...	29¾	29¾
Barrow Line—Lowtown to River Barrow, ...	28½	28½
Do. Athy to Waterford, ...	—	72
Shannon Line—Lowtown to River Shannon, ...	53½	53½
Kilbeggan Canal, ...	8¼	8¼
Ballinasloe Canal, ...	14	14
Mountmellick Canal, ...	11½	11½
Kildare Canal (Naas and Corbally), ...	7¼	7¼
Blackwood Canal, ...	4	4
Miltown Canal, ...	6½	6½
Edenderry Canal, ...	1	1
Lateral Canal (Lowtown), ...	1½	1½
	165¾	237¾
Other Navigations traded over :—		
Shannon Navigation, ...	75	123
Barrow Navigation, ...	22½	—
Total, ...	263¼	360¾

THE SHANNON NAVIGATION.

STATEMENT B.—Showing the Amount received and expended by the Commissioners of Public Works in Ireland in respect of Inland Navigation (Shannon River) during the last eleven years, and showing the chief items of Receipts, *i.e.* Rents and Tolls, and of Expenditure, *i.e.* Maintenance and Repairs of Works and Expense of Superintendence.

Year ending	RECEIPTS.			EXPENDITURE.		
	Rents.	Tolls.	Total Receipts (including Items other than Rents and Tolls.	Cost of Maintenance.	Cost of Superintendence.	Total Expenditure (including items not separately shown).
	£	£	£	£	£	£
31st March, 1890, ...	2,785	1,755	5,135	1,803	1,207	3,984
" 1891, ...	2,648	1,807	4,462	2,508	1,134	5,212
" 1892, ...	2,194	1,629	3,840	2,294	1,147	3 914
" 1893. ...	2,793	1,832	5,149	2,372	1,132	3,966
" 1894, ...	2,715	2,244	4,994	1,951	1,270	3,673
" 1895, ...	2,534	2,446	4,986	2,425	1,461	4,795
" 1896, ...	2,557	2,559	5,160	2,217	1,685	4 860
" 1897, ...	2,860	2,511	5,972	2,825	1,766	5,362
" 1898, ...	2,801	2 937	5,752	3 198	1,698	5 955
" 1899, ...	2,750	2,815	5,649	3 411	1,619	6,607
" 1900, ...	2,736	2,671	5,413	2,923	1,552	5,595
" 1901, ...	2,705	2,994	6,129	3,055	1,609	5,278
Total for Eleven Years,	32,078	28,200	62,041	30,982	17,180	59,201

LAGAN NAVIGATION COMPANY—ULSTER CANAL.

STATEMENT C—SHOWS RECEIPTS AND EXPENDITURE.

—	Expenditure.			Receipts.	
	Maintenance.	Salaries.	Interest.	Tolls.	Sundries.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1892-93, . . .	799 4 3	159 11 8	347 6 1	671 19 6½	101 6 0
1893-94, . . .	1,200 14 7	165 0 0	425 0 8	203 7 7	105 16 10
1894-95, . . .	1,125 17 8½	165 0 0	285 14 1	418 6 10½	100 4 4
1895-96, . . .	1,237 3 8½	165 0 0	352 0 0	494 1 2	119 1 1
1896-97, . . .	1,374 10 5	175 0 0	352 0 0	743 4 8½	120 17 7
1897-98, . . .	1,512 18 9	175 0 0	342 7 6	744 11 3	117 19 8
1898-99, . . .	1,638 4 11½	175 0 0	318 9 1	780 10 1	117 0 10
1899-00, . . .	1,474 4 11	175 0 0	315 0 4	776 1 8	118 7 7
1900-01, . . .	1,360 16 8	175 0 0	300 10 4	532 11 0	124 0 4
Total, . .	11,627 13 9½	1,529 11 8	3,045 0 1	5,205 3 6½	1,024 14 3

	£ s. d.
Total Receipts, 1892-93 to 1900-01, ...	0,289 17 0½
Total Expenditure " "	16,202 5 0½
Loss for 9 years, . . .	0,912 7 0

STATEMENT D.—Showing the TONNAGE carried over ULSTER CANAL from 1892, to April, March, 1901.

YEAR.	In.	Out.	Total.
1892-93, . . .	12,466	1,348	13,814
1893-94, . . .	6,967	965	7,932
1894-95, . . .	10,097	1,664	11,761
1895-96, . . .	11,942	1,251	13,193
1896-97, . . .	14,933	1,623	16,556
1897-98, . . .	15,843	1,697	17,540
1898-99, . . .	14,623	3,461	18,084
1899-00, . . .	16,134	2,333	18,467
1900-01, . . .	12,788	1,444	14,232
Total, . .	115,793	15,786	131,579

In conclusion, I have to return my thanks to the Authorities of the various Joint Stock Banks of Ireland, and of the Post Office Savings Bank Department; the Comptroller-General of the National Debt Office; the Governor of the Bank of Ireland, the Secretary of the Irish Agricultural Organisation Society, and the Chairmen and Directors of the several Railway Companies, for the valuable information which they so promptly afforded in connexion with the compilation of the Statistics in this Report.

I have the honour to be,

Sir,

Your obedient servant,

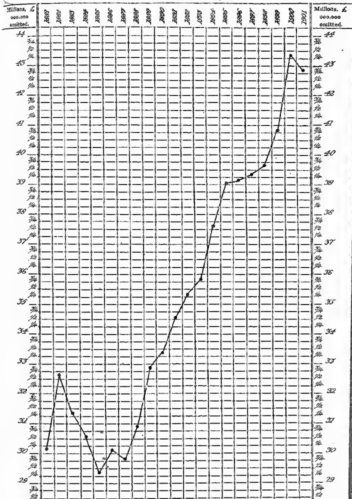
WILLIAM P. COYNE,

Superintendent of Statistics and Intelligence Branch.

DEPARTMENT OF AGRICULTURE AND
TECHNICAL INSTRUCTION FOR IRELAND,
UPPER MERRION-STREET.

Dublin, 10*th March*, 1902.

Diagram A.—Showing DEPOSITS AND CASH BALANCES IN JOINT STOCK BANKS in Ireland on the 31st of December in each year for the period 1881-1901.



DEPARTMENT OF AGRICULTURE AND TECHNICAL INSTRUCTION FOR IRELAND.
STATISTICS AND INTELLIGENCE BRANCH

Diagram B.—Showing AMOUNTS OF DEPOSITS IN POST OFFICE AND TRUSTEES SAVINGS BANKS in Ireland in December of each year for the period 1881-1901.

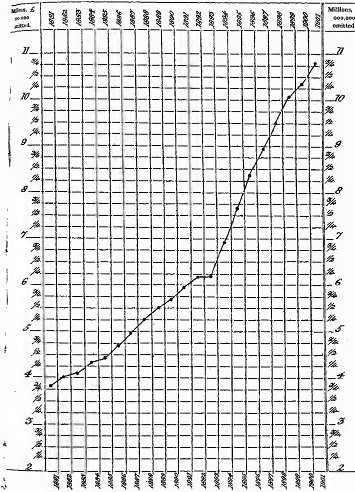


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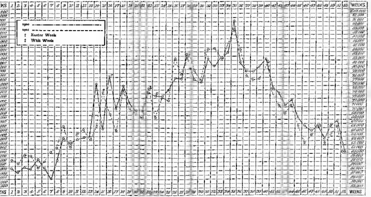
Diagram C.—Showing the Weekly Railway Receipts in Ireland for each of the Fifty-two Weeks of 1900 and 1901 in Thousands of Pounds.



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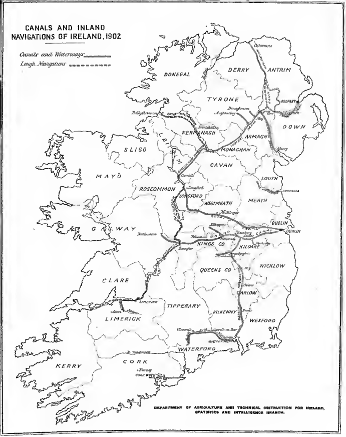

CANALS AND INLAND NAVIGATIONS OF IRELAND, 1902

DEPARTMENT OF AGRICULTURE AND TECHNICAL INSTRUCTION FOR IRELAND, STATISTICS AND INTELLIGENCE BRANCH.